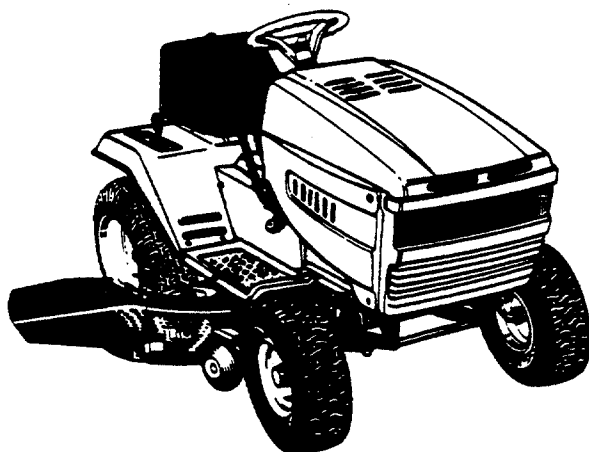


OWNER'S GUIDE

• SET-UP • OPERATION • MAINTENANCE • PARTS •



**18 H.P.
HYDROSTATIC
LAWN
TRACTOR**

**Model Number
143Y839H019**

IMPORTANT!

Record the **Model No.** and **Mfg. Code** which appear on your unit in the space below. You must have these numbers, along with the date of purchase, in order to receive warranty or service.

MEETS ANSI SAFETY STANDARDS

MODEL NO.

MFG. CODE

**Important:
Read Safety Rules
and Instructions Carefully**



WARNING: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368022, Cleveland, Ohio 44136-9722.

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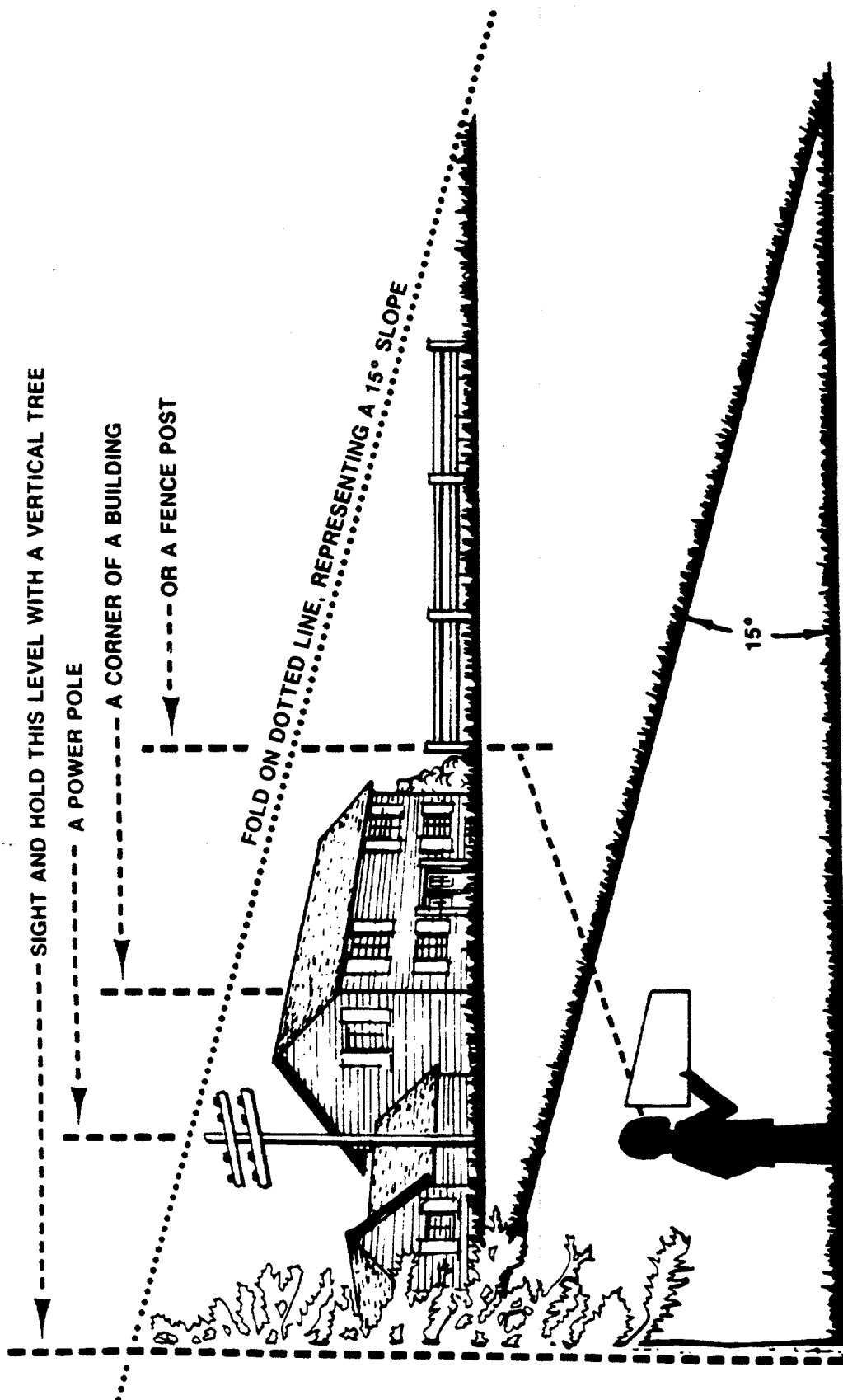


INSTRUCTIONS GIVEN WITH THIS SYMBOL ARE FOR PERSONAL SAFETY. BE SURE TO FOLLOW THEM.

USE THIS SHEET AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.

SLOPE GAUGE

(Keep this sheet in a safe place for future reference.)



Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.
Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

CONTENTS OF HARDWARE PACK

Remove this sheet from your owner's manual and lay the hardware on the illustration for identification purposes. Refer to the separate deck manual for any information concerning the deck. After assembly, keep the Slope Gauge which is on the reverse side of this sheet for future use.

(Hardware pack may contain extra items which are not used on your unit.
Part numbers are shown in parentheses.)

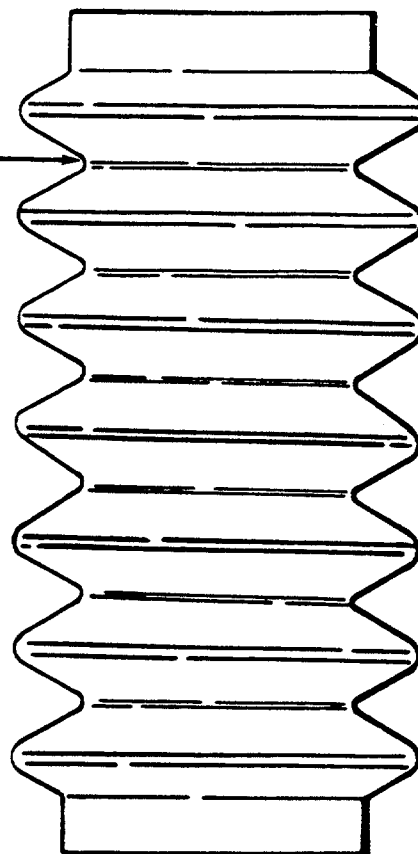
A STEERING WHEEL INSTALLATION

Hex Lock Nut
5/16-24 Thread
(712-0237)

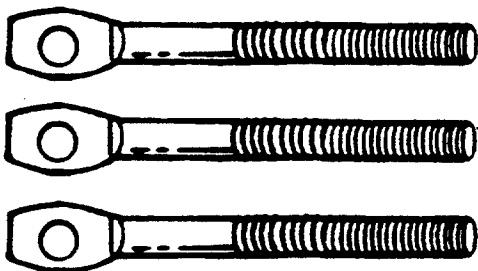
Cupped Washer
5/16" I.D.
(736-0242)

Steering Wheel
Insert
Is Not Shown

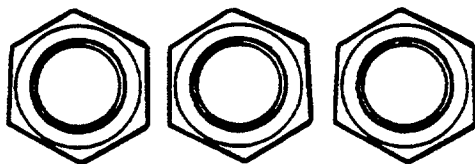
Steering
Bellow
(731-0954)



B ATTACHING THE DECK LINKS



Eyebolts
(711-0817)
(Not Shown to Scale)



Hex Nuts
1/2-13 Thread
(712-0206)

C FINAL ASSEMBLY

Mounting Clips
(727-0425A)
Quantity—20



D IGNITION KEYS


Not Shown—
(May be
Attached to
Tractor)



IMPORTANT

SAFE OPERATION PRACTICES



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR UNIT. WHEN YOU SEE THIS SYMBOL—  **HEED ITS WARNING.**



DANGER:

This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

I. GENERAL OPERATION

1. Read, understand, and follow all instructions in the manual and on the machine before starting. Keep this manual in a safe place for future reference and for ordering replacement parts.
2. Only allow responsible adults familiar with the instructions to operate the machine. Know controls and how to stop the machine quickly.
3. Do not put hands or feet under cutting deck or near rotating parts.
4. Clear the area of objects such as rocks, toys, wire, etc. which could be picked up and thrown by the blade. A small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury to you or a bystander. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects. Stop the blade(s) when crossing gravel drives, walks or roads.
5. Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
6. Never carry passengers.
7. Disengage blade(s) before shifting into reverse and backing up. Always look down and behind before and while backing.
8. Be aware of the mower and attachment discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the chute guard in place.
9. Slow down before turning. Operate the tractor smoothly. Avoid erratic operation and excessive speed.
10. Never leave a running machine unattended. Always turn off blade(s), place transmission in neutral, set park brake, stop engine and remove key before dismounting.
11. Turn off blade(s) when not mowing.
12. Stop engine and wait until blade(s) comes to a complete stop before (a) removing grass catcher or unclogging chute, or (b) making any repairs, adjusting or removing any grass or debris.
13. Mow only in daylight or good artificial light.
14. Do not operate the machine while under the influence of alcohol or drugs.
15. Watch for traffic when operating near or crossing roadways.
16. Use extra care when loading or unloading the machine into a trailer or truck. This unit should not be driven up or down a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load or unload properly.
17. Never make a cutting height adjustment while engine is running if operator must dismount to do so.
18. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Do not wear loose fitting clothes or jewelry. They can be caught in moving parts. Never operate a unit in bare feet, sandals, or sneakers.
19. Check overhead clearance carefully before driving under power lines, wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.
20. Disengage all attachment clutches, thoroughly depress the brake pedal, and shift into neutral before attempting to start engine.

II. SLOPE OPERATION

Slopes are a major factor related to loss of control and tip-over accidents which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

DO:

Mow up and down slopes, not across.
Remove obstacles such as rocks, limbs, etc.
Watch for holes, ruts or bumps. Uneven terrain could overturn the machine. **Tall grass can hide obstacles.**
Use slow speed. Choose a low enough gear so that you will not have to stop or shift while on the slope. Always keep tractor in gear when going down slopes to take advantage of engine braking action.
Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
Use extra care with grass catchers or other attachments. These can change the stability of the machine.
Keep all movement on the slopes **slow** and **gradual**. Do not make sudden changes in speed or direction. Rapid engagement or braking could cause the front of the machine to lift and rapidly flip over backwards which could cause serious injury.
Avoid starting or stopping on a slope. If tires lose traction, disengage the blade(s) and proceed slowly **straight** down the slope.
For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15° as shown on the slope gauge, do not operate this unit on that area or serious injury could result.

DO NOT:

Do not turn on slopes unless necessary; then, turn slowly and gradually downhill, if possible.
Do not mow near drop-offs, ditches or embankments. A wheel over the edge or an edge caving in could cause sudden overturn.
Do not mow on wet grass. Reduced traction could cause sliding.
Do not try to stabilize the machine by putting your foot on the ground.
Do not use grass catcher on steep slopes.

III. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. **Never** assume that children will remain where you last saw them.

1. Keep children out of the mowing area and in watchful care of an adult other than the operator.
2. Be alert and turn machine off if children enter the area.
3. Before and when backing, look behind and **down** for small children.
4. Never carry children. They may fall off and be seriously injured or interfere with the safe machine operation.
5. Never allow children under 14 years old to operate the machine. Children 14 years and over should only operate machine under close parental supervision and proper instruction.
6. Use extra care when approaching blind corners, shrubs, trees or other objects that may obscure vision.

IV. SERVICE

1. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
 - a. Use only an approved container.
 - b. Never remove gas cap or add fuel with the engine running. Allow engine to cool at least two minutes before refueling. Do not smoke.
 - c. Never refuel the machine indoors.
 - d. Never store the machine or fuel container inside where there is an open flame, or spark, such as a water heater, space heater, clothes dryer and the like.
2. Never run a machine inside a closed area.
3. Check frequently and keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in safe working condition.
4. Never tamper with safety devices. Check their proper operation regularly. Use all guards as instructed in this manual.
5. To reduce fire hazard, keep machine free of grass, leaves or

other debris build-up. Clean up oil or fuel spillage. Allow machine to cool before storing.

6. Stop and inspect the equipment for damage if you strike an object. Repair, if necessary, before re-starting and operating the machine.
7. Never make adjustments or repairs with the engine running.
8. Grass catcher components are subject to wear, damage and deteriorate, which could expose moving parts or allow objects to be thrown. Frequently, check components and replace with manufacturer's recommended parts when necessary.
9. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing blade(s).
10. Check brake operation frequently. Adjust and service as required.
11. Muffler, engine, and belt guards become hot during operation and can cause a burn. Allow to cool down before touching.
12. Do not change the engine governor settings or overspeed the engine.



DANGER: Your unit was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.

ASSEMBLY INSTRUCTIONS

IMPORTANT: After assembly, service engine with gasoline, and check oil level as instructed in the separate engine manual. Do not overfill.

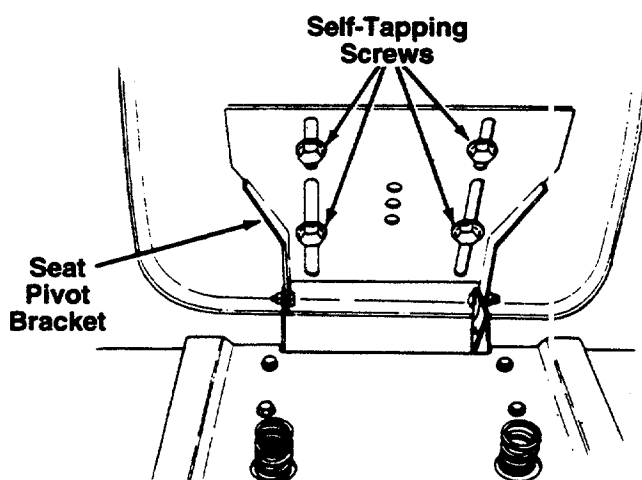


FIGURE 1.

NOTE: Reference to right or left hand side of the unit is observed from the driver's seat, facing forward. Refer to the separate deck manual for all information regarding the deck.

UNPACKING

1. Remove the carton from the tractor as follows. Open the top flaps and remove all carton inserts. Carefully cut on dotted line all the way around the carton. Lift the carton off the tractor. Remove the deck from beneath the tractor. Roll the tractor off the skid. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Remove page four from this manual and lay the contents of the hardware pack according to the illustration for identification.

SEAT ASSEMBLY

Remove the four hex self-tapping screws from the bottom of the seat. Place the seat in position against the seat pivot bracket, lining up the slotted holes in the pivot bracket with the holes in the seat. Select desired position for the seat, and secure with hex self-tapping screws. See figure 1.

BATTERY INFORMATION



WARNING

- A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it.*
- B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean, cold water. If there is any further discomfort, seek prompt medical attention.
- C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

- D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.
- E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.
- F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.
- G. As a further precaution, only charge the battery in a well-ventilated area.
***Always shield eyes, protect skin and clothing when working near batteries.**

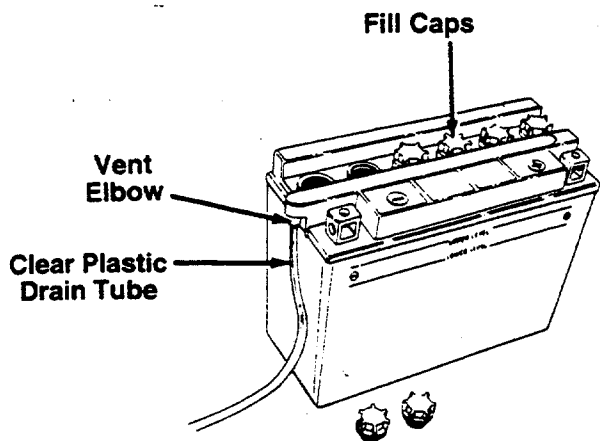


FIGURE 2.

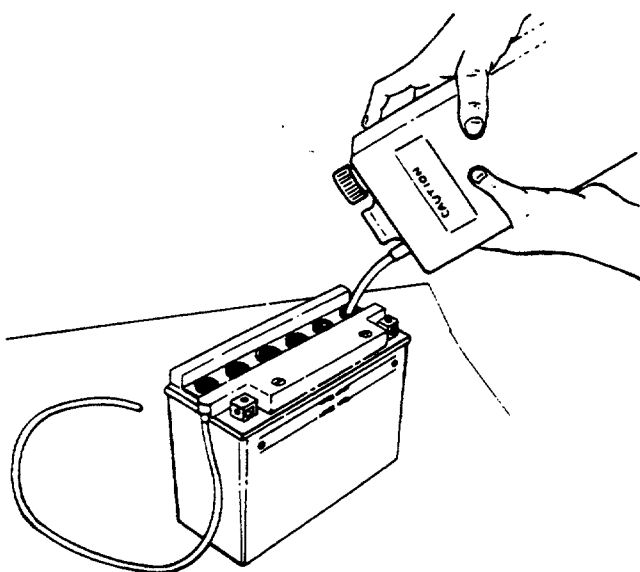


FIGURE 3.



DANGER

Battery contains sulfuric acid. Refer to warning on page 6. Antidote: **EXTERNAL**—Flush with water. **INTERNAL**—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek prompt medical attention. **EYES:** Flush with cool water for at least 15 minutes, then seek immediate medical attention.

Since batteries produce explosive gases, keep all lighted materials (cigarettes, lighters, matches, etc.) away. Be sure to charge battery only in well-ventilated areas.

**KEEP BATTERIES
OUT OF THE REACH OF CHILDREN!**

ACTIVATING THE BATTERY

Do not activate battery (fill with battery acid) until battery is actually placed in service. Be certain to read previous warnings before activating the battery.

1. Open the battery pack. Be careful not to puncture the box. It contains the **battery fluid (acid)** in a plastic container and one short plastic tube.
2. Remove the battery from the tractor by lifting the hood and removing the wing nuts and battery cover.
3. Place the battery on a table or workbench. Make certain the long plastic drain tube is in place on the vent elbow.
4. Remove the six fill caps from the top of the battery. See figure 2.
5. Place the battery fluid container on the table or workbench. Carefully cut off tip of the spout and attach the short plastic tube provided. Do not squeeze the container when cutting tip.
6. Fill each battery cell slowly and carefully to the **UPPER LEVEL** line marked on battery. See figure 3. Use caution as the acid level will rise rapidly after the bottom of the cell is filled.
7. **Allow battery to stand for 30 minutes** with the fill caps removed, while the plates absorb acid.

NOTE: You can continue assembling the tractor while battery is standing for 30 minutes (after filling with acid), and later while you are charging the battery.

CHARGE THE BATTERY

IMPORTANT: To obtain the maximum life from your battery, it **MUST BE CHARGED** prior to initial use.

1. Check the acid level in each cell. If necessary, refill each cell with **battery acid** to the **UPPER LEVEL** line on battery. Replace the fill caps.
2. Before discarding the empty container, neutralize any residue with baking soda and rinse container with water. Puncture container several times before discarding.
3. **CHARGE THE BATTERY** after the 30 minute standing period. Use a 12-volt automotive type battery charger to **SLOW CHARGE THE BATTERY (DO NOT FAST CHARGE)**. **DO NOT** use a charger rated higher than 10 amps. **Charge the battery** for a minimum of 2 hours or until battery is fully charged.

NOTE: The information listed above is for initial charge. Refer to the Maintenance section of this manual for battery care and charging instructions to obtain the maximum life from your battery.

IMPORTANT: After battery has been charged, add only distilled water. **DO NOT** add acid.

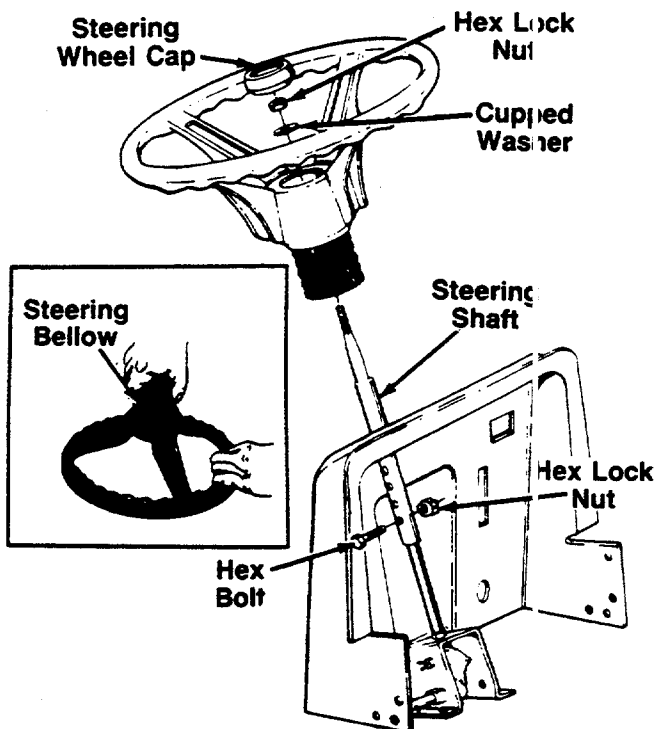


FIGURE 4.

STEERING WHEEL INSTALLATION (Hardware A)

1. There are four height positions for the steering wheel. For shipping purposes, the steering shaft is assembled in the lowest position. Lift the hood of the tractor. Remove the hex bolt and hex lock nut on the steering shaft. Raise the shaft to desired position and secure with hex bolt and hex lock nut. See figure 4.
2. Attach one end of the plastic steering bellow to the steering wheel as shown in figure 4, inset.
3. Position the front wheels of the tractor so they are pointing straight forward.
4. Place the steering wheel (with steering bellow attached) over the steering shaft extending through the dash, positioning steering wheel as desired.
5. Place the washer with the cupped side down over the steering shaft. Secure with 5/16" hex lock nut. See figure 4.
6. Place the steering wheel cap over the center of the steering wheel so the logo can be read from the operator's position, and press on by hand.

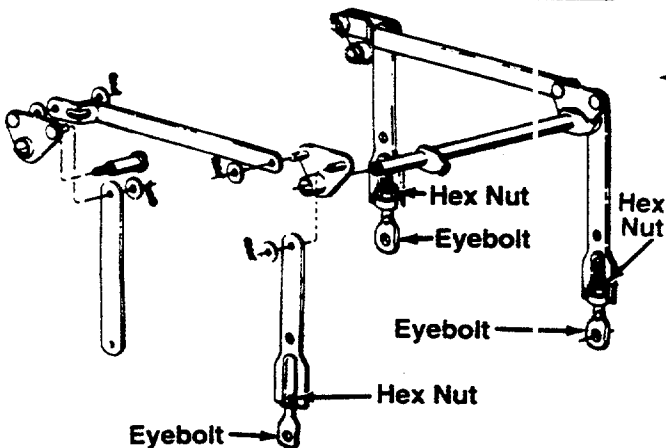
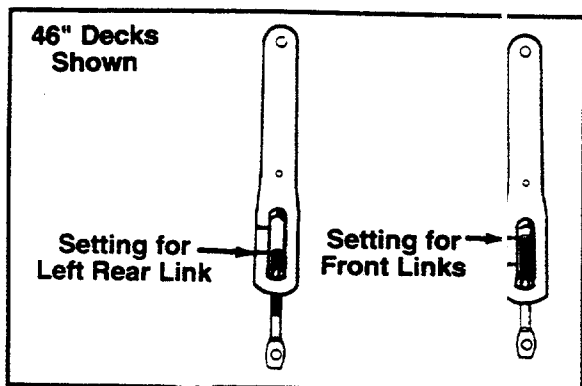


FIGURE 5.

ATTACHING THE DECK LINKS (Hardware B)

The three adjustable deck links have been shipped unassembled. Attach as follows.

1. Start 1/2" hex nuts on eyebolts provided. Insert the hex nuts and eyebolts into the adjustable lift links as shown in figure 5.
2. Thread eyebolts into the lift links and hex nuts. The left rear link should be adjusted so the eyebolt is to the **lower** mark as shown. The two front links should be adjusted to the **higher** mark.

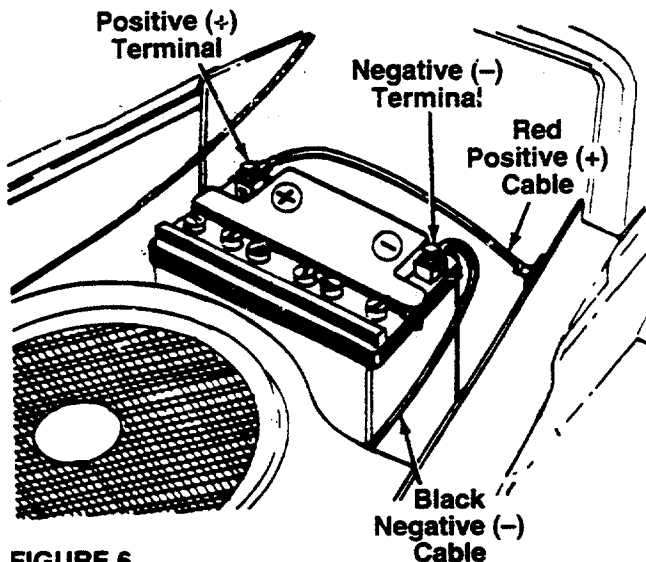


FIGURE 6.

INSTALLING THE BATTERY

1. Place the battery on the battery plate with the terminals toward the rear of the tractor.
2. Remove the hex bolt and hex nut from each battery terminal.
3. Attach the positive cable (heavy red wire) to the positive battery terminal (+) with one hex bolt and hex nut. See figure 6.

NOTE: The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

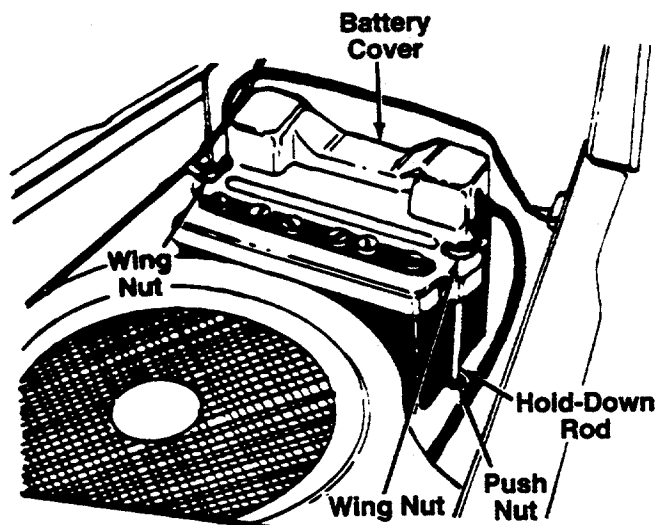


FIGURE 7.

4. Attach the negative cable (heavy black wire) to the negative battery terminal (-) with the other hex bolt and hex nut.
5. Place the black plastic battery cover in position over the hold-down rods. Secure with wing nuts.

NOTE: It may be necessary to pull up on the hold-down rods in order to start the wing nuts.

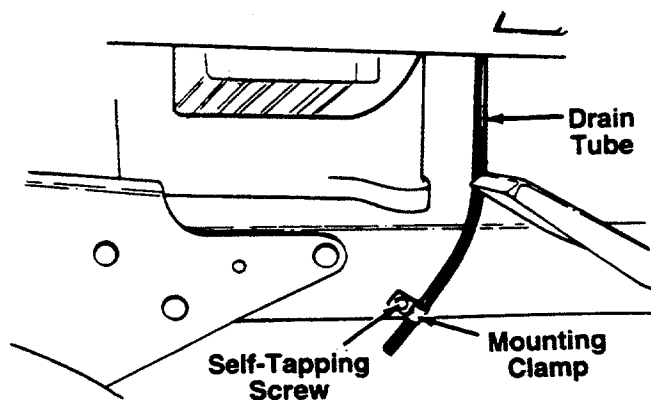


FIGURE 8.

6. Route the battery drain tube over to the left side of the tractor. Loosen the self-tapping screw which secures the mounting clamp. See figure 8. Slip the end of the drain tube into the mounting clamp. Tighten the self-tapping screw to secure the clamp. Do not overtighten which could collapse the drain tube.

NOTE: The vented battery allows any gases or liquid from the battery to be drained onto the ground.

7. Trim end of drain tube if more than 1 inch extends below the frame.

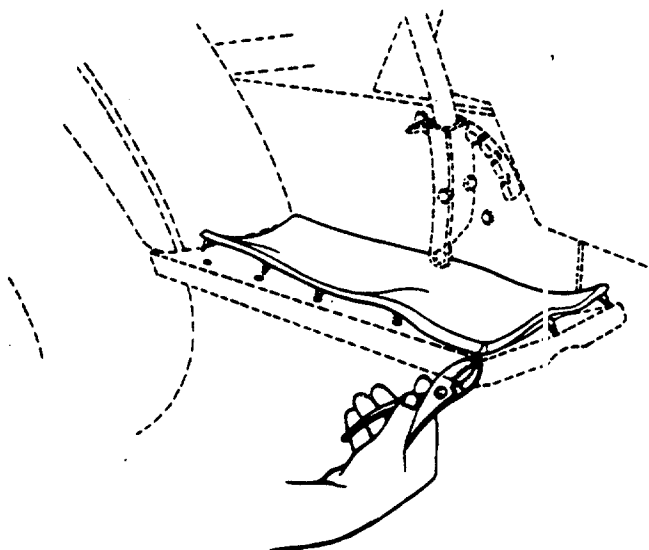


FIGURE 9.

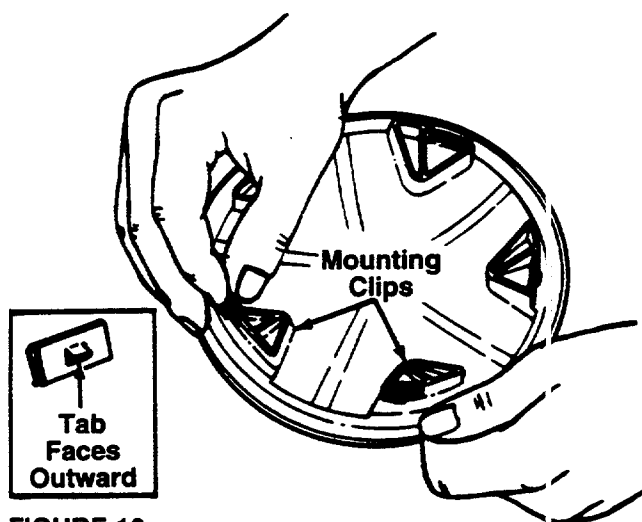


FIGURE 10.

FINAL ASSEMBLY (Hardware C)

1. If not already assembled, attach foot pads as follows. Position one foot pad on top of the running board on the tractor, lining up the studs on the bottom of pad with the holes in the running board. Pull the studs through the holes in the running board using a pair of pliers. Repeat on other side of tractor. See figure 9.
2. If not already assembled, attach the four hub caps as follows.
 - a. Slide five mounting clips on each hub cap as shown in figure 10, with the tabs on the mounting clips facing outward.
 - b. Line up hub caps with wheel rims. Push hub caps on by hand.
3. Make certain all nuts and bolts are tightened securely.

TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure).



WARNING: Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

ATTACHING THE CUTTING DECK

Attach the cutting deck as instructed in the separate deck manual packed with your unit.

CONTROLS

IGNITION SWITCH

The ignition switch is located on the dashboard. Turn the key to the START position to start the engine. When the engine is running, leave the key in the ON position. To stop the engine, turn the key to the OFF position. See figure 11.



WARNING: Remove the key from the tractor when the tractor is not in use to prevent accidental starting.

THROTTLE CONTROL

The throttle control is located on the left side of the dashboard and is used to regulate the engine speed. See figure 11. The engine should be operated from 3/4 to full throttle (FAST) when operating any equipment that uses the tractor engine as a source of power such as the mowing deck, snow thrower or rotary tiller.

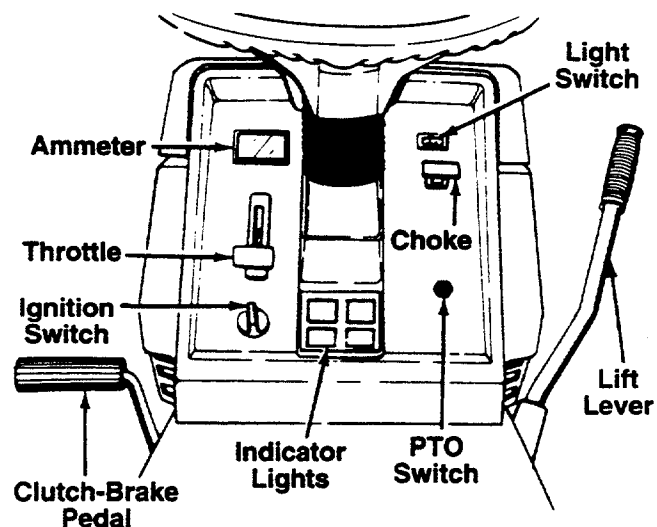


FIGURE 11.

CHOKE CONTROL

The choke control is located on the right side of the dashboard and is operated manually. Details for the choke operation are covered in the separate engine manual packed with your unit. See figure 11.

LIGHT SWITCH

The head lamps are operated by pushing the light switch located on the dashboard. The head lamps will only operate when the engine is running. See figure 11.

AMMETER

The ammeter registers the rate of battery charge or discharge. The ammeter will register on the discharging side when starting the engine. It should register on the opposite side (charging) when the engine is running in the fast position until the battery is completely charged. With a fully charged battery or with the engine idling, the ammeter will not show a charge. See figure 11.

HYDROSTATIC CONTROL LEVER

The hydrostatic control lever is located on top of the fender on the left side of the tractor. This single control lever, connected to the hydrostatic transmission, controls both the speed and direction of the tractor. Infinite speed control is achieved by moving the control lever forward or backward. The farther forward or backward you move the control lever, the faster you will travel. Pulling the control lever into neutral (N) area will stop the tractor. To increase rear wheel torque (pulling power), move the control lever towards neutral (N) position. The lawn tractor responds similar to shifting to a lower gear with a gear type transmission. See figure 12.

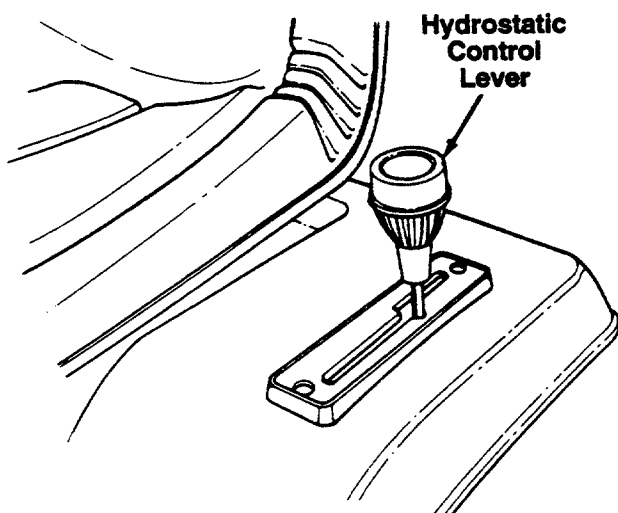


FIGURE 12.

CLUTCH-BRAKE PEDAL

The clutch-brake pedal is located on the left side of the tractor. See figure 11. Depressing the pedal disengages the engine from the hydrostatic transmission and applies the brake.

NOTE: The clutch-brake pedal must be depressed to start the engine.

PARKING BRAKE

To set the parking brake, depress the clutch-brake pedal and pull up the parking brake knob. It will stay in the raised position. To release the parking brake, depress and release the clutch-brake pedal. See figure 13.

NOTE: The parking brake must be set if the operator leaves the seat with the engine running.

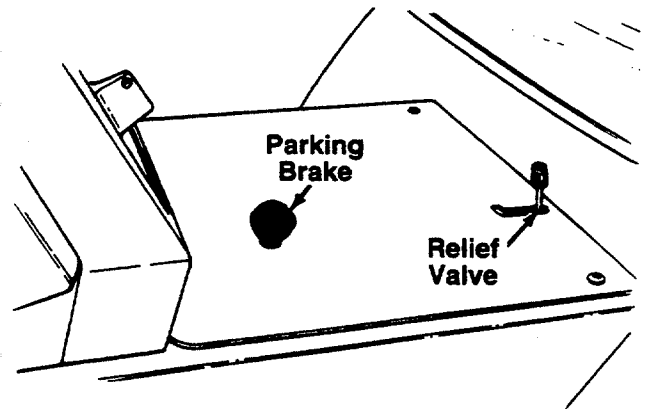


FIGURE 13.

RELIEF VALVE

A hydrostatic relief valve is provided so the unit can be moved without the engine running. The lever which operates the relief valve is located on the console. See figure 13.

To operate the relief valve, place the hydrostatic control lever in neutral, release the parking brake, push the lever forward and to the right to lock. Be certain to release the lever by pushing it to the left before operating the engine.

LIFT LEVER

The five position lift lever is used to change the operating position of the attachments. To operate, pull the lever towards you. To release, move the lever to the right and then forward. See figure 11.

POWER TAKE-OFF (PTO) SWITCH

The PTO switch is located on the right side of the dashboard. See figure 14. The PTO switch **must** be in the OFF position (down) when starting the engine, when shifting into reverse and if the operator leaves the seat.

To engage the PTO switch, pull knob out and lift up to ON position, then release. The knob will return to RUN position. See figure 14.

NOTE: The PTO switch **must** be in OFF position when starting the engine, when shifting into reverse and if the operator leaves the seat.

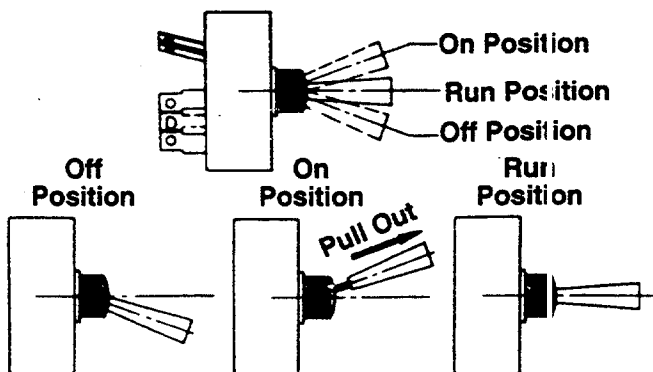


FIGURE 14.

INDICATOR LIGHTS

The unit is equipped with three indicator lights, located on the dash panel. See figure 11. If a light illuminates when attempting to start the unit, proceed as follows:

CLUTCH—Depress the clutch pedal.

PTO—Disengage the PTO.

OIL—Check the crankcase oil level, and add oil as required.

OPERATION



WARNING

AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS. • AVOID SUDDEN TURNS.
- DO NOT OPERATE THE UNIT WHERE IT COULD SLIP OR TIP
- IF MACHINE STOPS GOING UPHILL, STOP BLADE(S) AND BACK DOWNHILL SLOWLY
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
- NEVER CARRY CHILDREN.
- LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE(S).
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
- BEFORE LEAVING OPERATOR'S POSITION, DISENGAGE BLADE(S), PLACE THE SHIFT LEVER IN NEUTRAL, ENGAGE BRAKE LOCK, SHUT ENGINE OFF AND REMOVE KEY.

READ OPERATOR'S MANUAL

GAS AND OIL FILL-UP

Check oil level and add if necessary. Service the engine with gasoline as instructed in the separate engine manual packed with your tractor. Read instructions carefully.

IMPORTANT: Your tractor is shipped with oil however, you **must** check the oil level before operating. Be careful not to overfill.

The gasoline tank is located under the seat. The filler neck is behind the seat. Do not overfill.



WARNING: Never fill fuel tank indoors, with engine running or while engine is hot.

OPERATING THE TRACTOR

IMPORTANT: This unit is equipped with a **safety interlock system** for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the clutch-brake

pedal is depressed and the PTO switch is in the OFF position. In addition, the PTO switch must be in the OFF position when the unit is put into reverse or the engine will shut off. If the operator leaves the seat with the PTO ON and/or without setting the parking brake, the engine will shut off.



WARNING: Do not operate the tractor if the interlock system is malfunctioning because it is a safety device, designed for protection.

1. Place the PTO switch in the OFF position.
2. Depress the clutch-brake pedal and set the parking brake.
3. Place the hydrostatic control lever in the NEUTRAL (N) position.
4. Set the throttle control in the FAST position.
5. Pull out the choke control. (A warm engine requires less choking.)
6. Turn the ignition key to the right to the START position. After the engine starts, release the key. It will return to the ON position.
7. Slowly push in the choke as the engine warms up.
8. Depress the clutch-brake pedal so the parking brake is released and then release the clutch-brake pedal.
9. Move the hydrostatic control lever forward. The farther forward you move the hydrostatic control lever, the faster you will travel.
10. To stop the tractor, pull the hydrostatic control lever into NEUTRAL (N) or depress the clutch-brake pedal.
11. To shut off the engine, turn the ignition key to the left to the OFF position. Remove the key to prevent accidental starting while equipment is unattended.

Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage lawn tractor or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.



WARNING: Before leaving the operator's position for any reason, disengage the blades, place the shift lever in neutral, engage the parking brake, shut engine off and remove the key.

When stopping the unit to empty a grass bag, etc., follow the instructions above. This procedure will also eliminate "browning" the grass, which is caused by hot exhaust gases from a running engine.

IMPORTANT: If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

NOTE: If any problems are encountered, refer to the Trouble Shooting Guide on page 18.

GRASS COLLECTOR Model 190-083 is available as optional equipment for the lawn tractor shown in this manual.



WARNING: The mower should not be operated without the entire grass catcher or chute deflector in place.

NOTE: Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

For replacement bags, use only factory authorized replacement bag.

ADJUSTMENTS



WARNING: Disconnect the spark plug wires and ground against the engine before performing any adjustments, repairs or maintenance.

SEAT ADJUSTMENT

To adjust the position of the seat, loosen the four self-tapping screws on the bottom of the seat. See figure 1. Slide the seat forward or backward as desired. Retighten the self-tapping screws.

HYDROSTATIC NEUTRAL CONTROL ADJUSTMENT

The hydrostatic transmission control is in correct adjustment when the tractor does not move with the engine running, the clutch engaged and the hydrostatic control lever in the neutral position.

If adjustment is necessary, follow these steps:

1. Raise both rear wheels off the ground by placing blocks under the rear frame.
2. Remove the transmission panel by removing the parking brake knob and truss machine screws.
3. Loosen the hex jam nut on the speed selector adjusting rod. See figure 15.

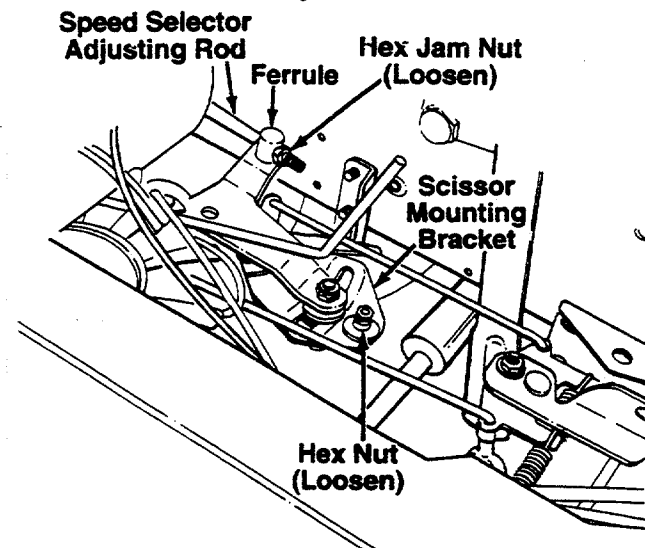


FIGURE 15.

4. Loosen the hex nut on the scissor mounting bracket. See figure 15.
5. Start the engine and run at full throttle.
6. Move the hydrostatic control lever until you find neutral (rear wheels do not rotate in either direction).



WARNING: Be careful of the cooling fan on the hydrostatic transmission.

7. Depress the clutch-brake pedal all the way and set the parking brake.
8. Shut off the engine.
9. Tighten the hex nut on the scissor mounting bracket.
10. Thread the speed selector rod in or out of the ferrule until the hydrostatic control lever lines up in the neutral position on the speed control index bracket.
11. Tighten hex jam nut against the ferrule.
12. Replace the transmission panel and parking brake knob.
13. Remove the blocks from under the frame and test the operation of the tractor.

LEVELING THE DECK

1. Check tire pressure in all four tires. Recommended pressure is approximately 12 p.s.i.
2. Make certain all deck wheels are mounted in same relative location.
3. On a level surface, engage the PTO and lower the deck until it reaches the ground.

All four deck wheels should reach the ground at the same time. If they do not, adjust the deck links as necessary.

NOTE: When adjusting the deck links, disengage the PTO. Remove the hairpin clip and washer from the weld bolt. Thread eyebolt up or down the link as necessary, and reassemble.

4. Raise the deck 1/2" to 1" above the ground.

Check to be certain the distance from the bottom edge of the deck to the ground is the same on both sides of the deck. If it is not, adjust the links on the left side of the unit.

Check to be certain the front of the deck is 1/4" to 3/8" lower than the rear of the deck. If it is not, adjust the two front links to obtain this distance.

STEERING WHEEL ADJUSTMENT

There are four height positions for the steering wheel. To adjust the height of the steering wheel, remove the hex bolt and hex lock nut on the steering shaft. Place the steering wheel in the position desired and secure with hex bolt and hex lock nut. Refer to figure 4.

NOTE: When raising the height of the steering wheel, stretch the steering bellow to cover the steering shaft.

The steering shaft may also be adjusted if there is too much play between the steering gear and segment. To adjust, loosen the hex bolt and nut on the front of the bearing retainer bracket. See figure 16. Pry the bearing retainer bracket toward the right until the steering gear engages solidly into the teeth of the steering segment. Retighten the hex bolt and nut.

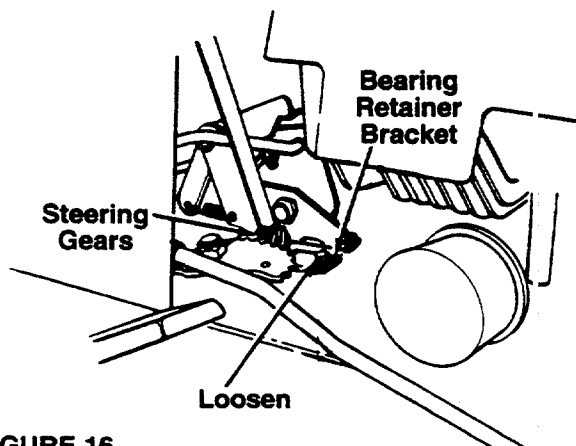


FIGURE 16.

BRAKE ADJUSTMENT (See figure 17)

The brake is located by the right rear wheel inside the frame. During normal operation of this machine, the brakes are subject to wear and will require periodic examination and adjustment.



WARNING: Do not adjust the brake while the engine is running. Be sure to block the wheels of the tractor before making the brake adjustment.

To adjust the brake, remove the cotter pin. Adjust the castle nut so the brake starts to engage when the brake lever is 1/4" to 5/16" away from the axle housing.

NOTE: Figure 17 is shown with the unit tipped up on rear wheels for clarity only.

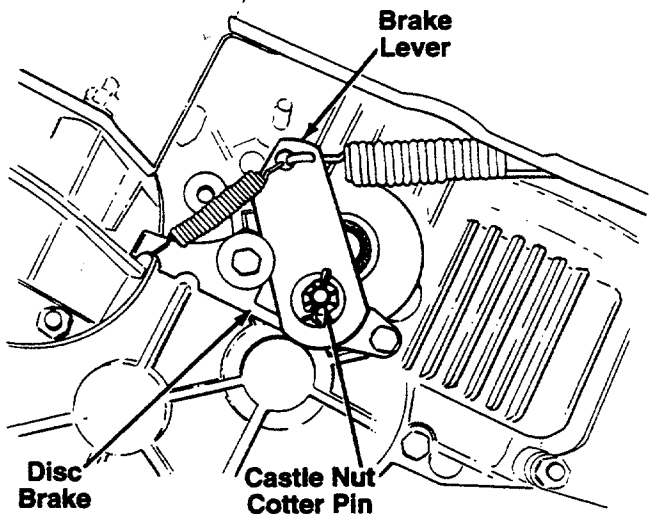


FIGURE 17.

CARBURETOR ADJUSTMENTS



WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load. Refer to separate engine manual for carburetor adjustment information.

NOTE: A dirty air cleaner will cause an engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor.

LUBRICATION



WARNING: Always stop engine and disconnect spark plug wires before cleaning, lubricating or doing any kind of work on lawn tractor.

STEERING GEARS

Lubricate teeth of steering gears with automotive multi-purpose grease after every 25 hours of operation or once a season. Refer to figure 16.

STEERING SHAFT

Lubricate steering shaft at least once a season with light oil.

TRANSAXLE

The transaxle is lubricated at the factory and does not require checking. If repairs are needed contact your local service dealer.

LINKAGE

Once a season lubricate all the pivot points on the clutch, brake and lift linkage with SAE 30 engine oil.

FRONT WHEELS

The front wheels are provided with grease fittings. The rear wheels must be removed from the axle for lubrication. Lubricate at least once a season with automotive multi-purpose grease.

PIVOT POINTS

Lubricate all pivot points with light oil at least once a season.

BALL JOINTS

The ball joints and drag link ends are permanently lubricated.

MAINTENANCE



WARNING: Disconnect the spark plug wire and ground against the engine before performing any adjustments, repairs or maintenance.

TROUBLE SHOOTING

Refer to the chart on page 18 for trouble shooting engine problems.

HYDROSTATIC TRANSMISSION COOLING

The hydrostatic transmission is cooled by the oil, fan and fins. If the hydrostatic transmission runs hot, check to see if the fan is in operating condition and the fins are clean.

NOTE: DO NOT use high pressure water spray or steam to clean the hydrostatic transmission.

ENGINE

Refer to the separate engine manual for all engine maintenance instructions.

Service **air cleaner** every 10 hours under normal conditions. Clean every few hours under extremely dusty conditions. To service the air cleaner, refer to the separate engine manual packed with your unit.

The **spark plugs** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. **Read and follow instructions carefully.**

FUEL FILTER

Your unit is equipped with a replaceable in-line fuel filter. Replace filter whenever contamination or discoloration is noticed. Order replacement filter through your authorized engine service dealer.

CLEANING ENGINE AND DECK

Any fuel or oil spilled on the tractor should be wiped off promptly. Grass, leaves and other dirt must not be left to accumulate around the cooling fins of the engine or on any part of the machine.

Clean the underside of the deck after each mowing.

WHEEL ADJUSTMENT

The caster (forward slant of the king pin) and the camber (tilt of the wheels out at the top) require no adjustment. Automotive steering principles have been used to determine the caster and camber on the tractor. The front wheels should toe-in 1/8 inch.

To adjust the toe-in, follow these steps.

1. Remove the hex nut and lock washer, and drop the end of the tie rod from the axle bracket. See figure 18.
2. Loosen the hex jam nut on tie rod.
3. Adjust the tie rod assembly for correct toe-in.

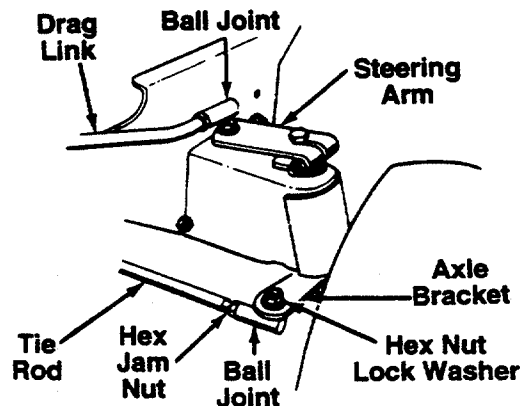


FIGURE 18.

Dimension "B" should be approximately 1/8" less than Dimension "A." See figure 19. To increase Dimension "B," screw tie rod into tie rod end. To decrease Dimension "B," unscrew tie rod from tie rod end. Reassemble tie rod. Check dimensions. Readjust if necessary.

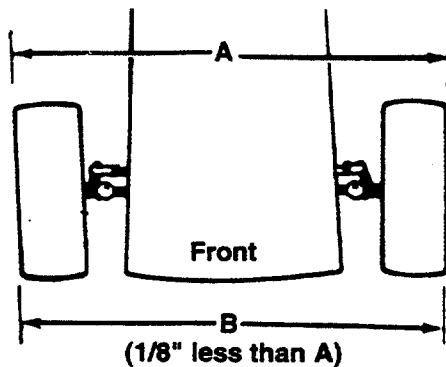


FIGURE 19.

DRAG LINK

If the drag link or ball joints are changed, the new assembly must be adjusted to the exact same length as the original. If adjusted incorrectly, it will allow the tractor to turn sharper one direction than the other.

To take off the drag link, remove the nuts and lock washers holding the ball joint to the steering gear and right front axle bracket. See figure 18.

BATTERY CARE AND MAINTENANCE

CHECK FLUID LEVEL

Check fluid level inside each cell of the battery every two weeks and before and after charging. Always keep level between the LOWER LEVEL and UPPER LEVEL lines on battery.

Add only distilled water. Never add additional acid or any other chemicals to the battery after initial activation.

NOTE: After operating the lawn tractor for a long period of time, check the fluid level in the battery as it can overheat and lose fluid.

CHARGING THE BATTERY

The engine is equipped with an alternator which charges battery when tractor is operated. Under normal conditions, the battery only needs to be charged before, during and after off-season storage. Follow the instructions under "Off-Season Storage."

To charge the battery: Make certain fluid level in each cell is between LOWER LEVEL and UPPER LEVEL. Use a 12 volt automotive charger which is rated less than 10 amps. Charge for a minimum of 3 hours and a maximum of 5 hours.

REMOVING / INSTALLING / JUMP STARTING



WARNING: When removing or installing the battery, follow these instructions to prevent the screwdriver from shorting against the frame.

Removing the Battery: Disconnect negative cable first, then positive cable.

Installing the Battery: Connect positive cable first, then negative cable.

Jump Starting

1. First, connect end of one jumper cable to the positive terminal of the good battery, then the other end to the positive terminal of the dead battery.
2. Connect the other jumper cable to the negative terminal of the good battery, then to the FRAME OF THE UNIT WITH THE DEAD BATTERY.



WARNING: Failure to use this procedure could cause sparking, and the gas in either battery could explode.

CLEAN THE BATTERY

Clean the battery by removing it from the unit and washing with a baking soda and water solution. If necessary, scrape the battery terminals with a wire brush to remove deposits. Coat terminals and exposed wiring with grease or petroleum jelly to prevent corrosion.

BATTERY FAILURES

Some common causes for battery failure are: incorrect initial activation, lack of water, adding chemicals other than water after initial activation, undercharging, overcharging, corroded connections, freezing. **These failures do not constitute warranty.**

TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

When installing a tire to the rim, be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.



WARNING: Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

DRIVE BELT REPLACEMENT (See figure 20)

1. Depress the clutch pedal and set parking brake.
2. Remove the deck from the tractor.
3. Raise and block the front wheels of the tractor so you can work under it.
4. Remove the four self-tapping screws which hold the belt keeper assembly to the frame at the engine pulley. Push the belt keeper assembly forward, out of the way. See figure 20.

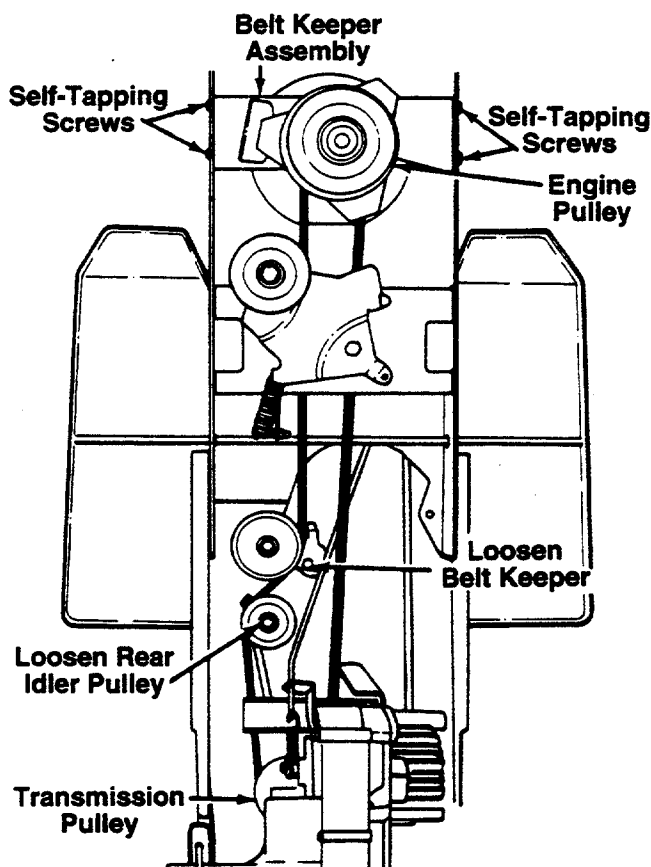


FIGURE 20.

5. Loosen the hex bolt which acts as a belt keeper by the front idler pulley.
6. Loosen the rear idler pulley. Remove the belt from around both idler pulleys.
7. Unplug the electric PTO.
8. Roll belt up off engine pulley, onto the pulley hub to obtain slack in the belt.
9. Remove belt from the transmission pulley, lifting the belt up over the fan on top of the pulley.
10. Remove belt from the engine pulley.

Reassemble using a new belt, following instructions in reverse order.

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows.

1. Clean the engine and the entire unit thoroughly.
2. Lubricate all lubrication points. Wipe the entire machine with an oiled rag to protect the surfaces.
3. Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
4. **Charge battery fully.** The battery loses some of its charge each day when the unit is not used. NEVER store battery without a full charge. Recharge battery before returning to service or every two months, whichever occurs first.
5. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

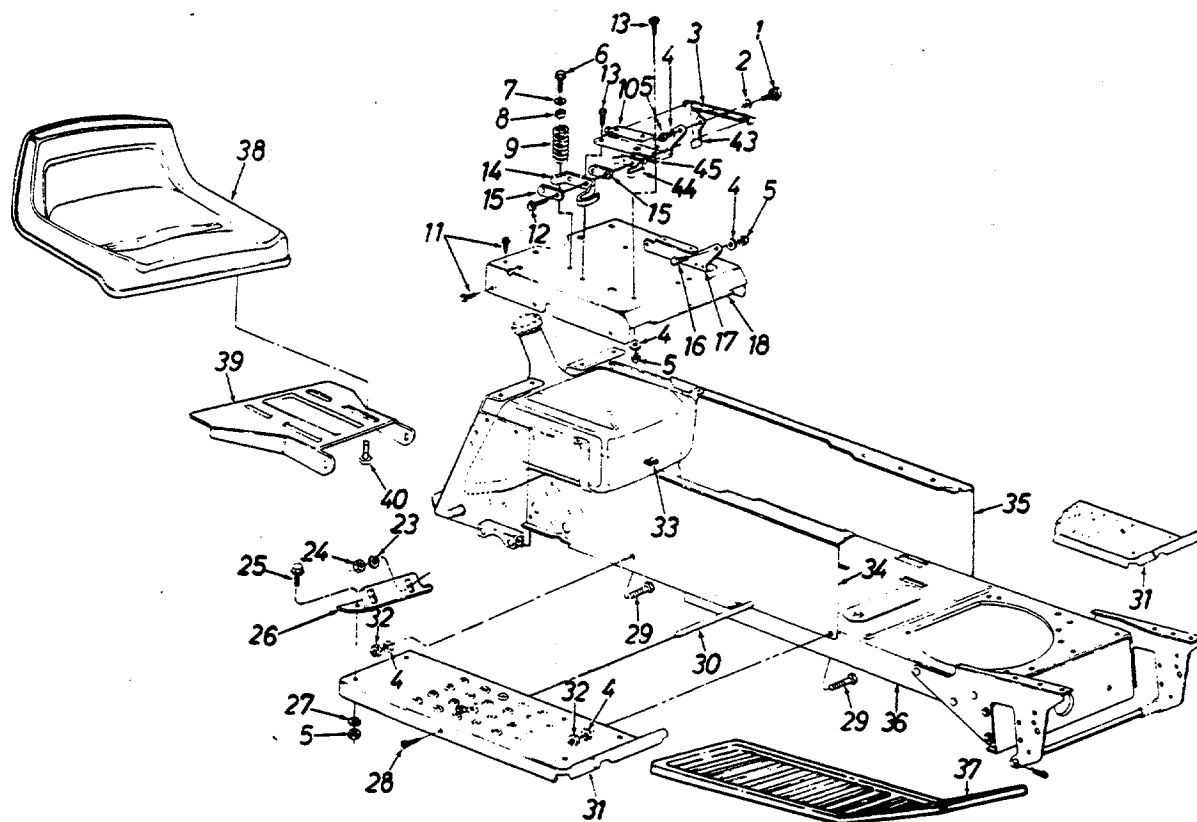
NOTE: When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine will not crank	Battery installed incorrectly	The battery must be installed with negative terminal attached to black ground wire. Negative terminal is identified at the post by "NEG", "N" or "-". The positive terminal, identified by "POS", "P" or "+", must be attached to the big red wire which goes to the solenoid.
	Battery is dead or weak	Check fluid level in battery. If fluid is low, fill to UPPER LEVEL line with water. Charge with taper charger until fully charged.
	Blown fuse or circuit breaker	Replace fuse with 7-1/2 amp. automotive type fuse. Fuses seldom fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.
	Engine ground wire loose	Engine should have a black ground wire running from engine to frame or mounting bolt.
	Safety switch button not depressed	There are two switches in the starting circuit of your unit: the clutch pedal switch and the deck lift lever switch. Make certain the actuator is fully depressing the buttons on each switch.
Engine cranks but will not start	Throttle or choke not in starting position	Check owner's guide for correct position for throttle control and choke for starting.
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel line or in-line fuel filter plugged. Remove and clean fuel line. Replace filter if necessary.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	Stop engine immediately. Check all pulleys, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	Stop engine immediately. Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Speed selection Blades short or dull	Throttle must be set at full throttle. Use lower ground speed. The slower your ground speed, the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

If the above steps fail to correct the problem, take the unit to your local authorized service dealer for repair.

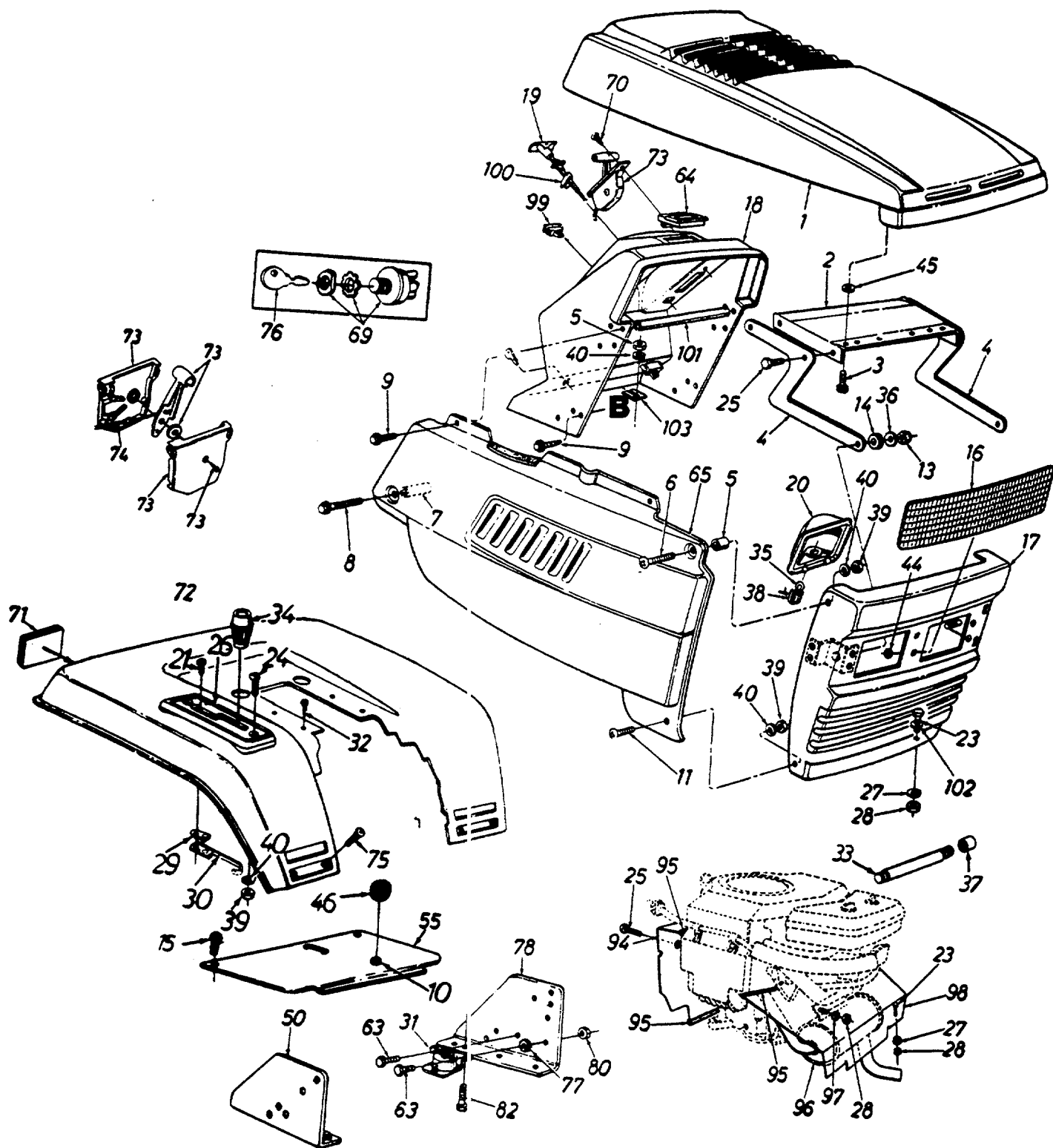
Model 839



PARTS LIST FOR MODEL 839 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	738-0296		Shld. Bolt .437" Dia. x .162"	25	710-0118		Hex Bolt 5/16-18 x .75" Lg.
2	736-0141		Spr. Wash. .445" I.D.	26	17406		Fender Bracket—R.H.
3	732-0581B		Ext. Spring 5.31" Lg.		17407		Fender Bracket—L.H.
4	736-0119		L-Wash. 5/16" I.D.*	27	736-0242		Bell-Wash. .345" I.D. x .88" O.D.
5	712-0267		Hex Nut 5/16-18 Thd.*	28	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.
6	710-0601		Hex Wash. Hd. Tap Scr. 5/16-18 x .7" Lg.	29	710-1012		Rib Neck Bolt 5/16-24 x .75" Lg.
7	736-0159		Fl-Wash. .344" I.D.	30	738-0435		Running Board Rod
8	722-0160		Bushing	31	16922		Running Board—R.H.
9	732-0588		Compression Spring		16921		Running Board—L.H.
10	17702		Seat Pivot Brkt. Support—R.H.	32	712-0123		Hex Nut 5/16-24 Thd.
11	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75" Lg.	33	726-0139		Speed Nut #10Z
12	710-0227		Hex Wash. Hd. AB-Tap Scr. #8 x .5" Lg.	34	17360A	N	R.H. Side Frame
13	710-1228		Torx Hd. AB-Tap Scr. 5/16-18 x .75" Lg.	35	17361B	N	L.H. Side Frame
14	725-1303		Spring Switch	36	17359B	N	Lower Frame
15	726-0279		Insulator Plate	37	731-1052		Rubber Foot Pad
16	738-0155		Shld. Bolt .437" Dia. x .162"	38	757-0338		Seat 10-5/8" High
17	17701		Seat Pivot Brkt. Support—L.H.	39	15607D		Seat Pivot Bracket
18	16848C		Seat Plate	40	710-0623		Hex Tap Scr. 3/8-16 x .75" Lg.
23	736-0329		L-Wash. 1/4" I.D.*	43	17239A		Seat Lift Bracket
24	712-0287		Hex Nut 1/4-20	44	725-1439		Seat Spring Switch
				45	726-0278		Insulator Boss Plate

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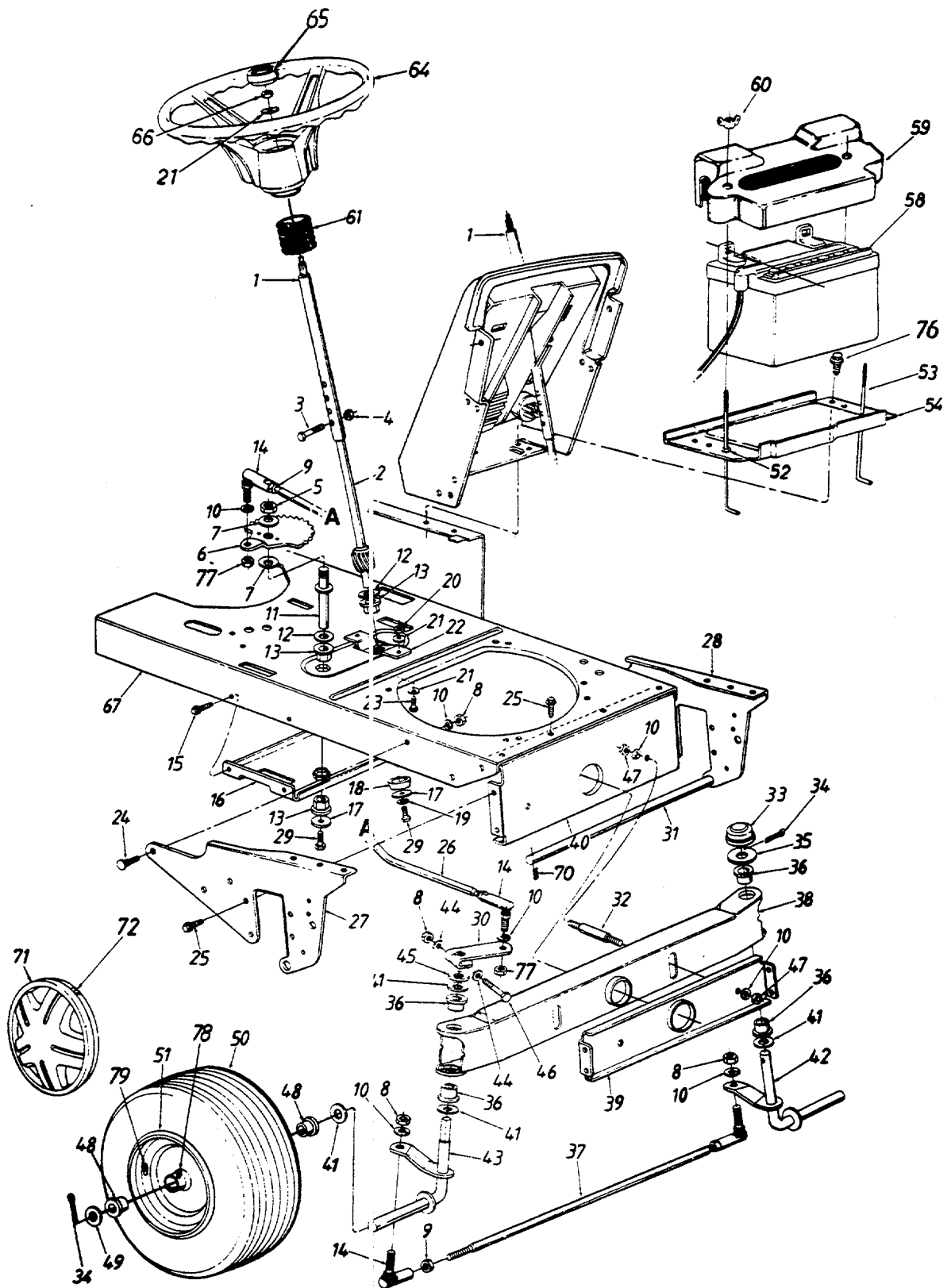
Model 839

PARTS LIST FOR MODEL 839 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	731-1054A		Hood	33	737-0164		Pipe Nipple 3/8-18 Npt.
2	16903A		Hood Plate	34	720-0218		Shift Knob
3	710-1005		Hex Wash. Hd. Tap Scr. 1/4 x .5" Lg.	35	725-0963		Lamp
4	17273		Hood Hinge	36	736-0242		Bell-Wash. .34" I.D. x .87"
5	750-0287		Spacer .34" I.D. x .437"	37	737-0143		Pipe Cap 3/8-18 Npt.
6	710-0166		Truss Hd. Mach. Scr. 1/4-20 Thd.	38	725-1650		Socket
7	750-0583		Spacer .26" I.D. x .375"	39	712-0287		Hex Nut 1/4-20 Thd.*
8	710-1026		Hex Wash. TT-Tap Scr. 1/4-20 x 1.75" Lg.	40	736-0329		L-Wash. 1/4" I.D.*
9	710-0642		Hex T-Tap Scr. 1/4-20 x .75" Lg.	44	726-0201		Speed Nut 5/16" I.D.
10	731-0405		Snap Bushing	45	736-3010		FI-Wash. .406" I.D.
11	710-0286		Truss Mach. Scr. 1/4-20 x .5" Lg.	46	720-0166		Ball Knob
12	712-0324		Hex Ins. L-Nut 1/4-20 Thd.	50	17293B		Dash Support Brkt.—R.H.
13	712-0429		Hex L-Nut 5/16-18 Thd.	55	17391A		Transmission Cover
14	735-0126		Rubber Washer	63	710-0289		Hex Bolt 1/4-20 x .5" Lg.
15	710-0351		Truss Mach. B-Tap Scr. #10 x .5" Lg.	64	725-0925		Ammeter
16	731-1044		Headlight Lens	65	17458A		Side Panel Ass'y.—R.H.
17	17410		Grille Ass'y.		17459A		Side Panel Ass'y.—L.H.
18	731-1047A	N	Dash Ass'y.	69	725-0267		Ignition Switch
19	746-0614A		Choke Control	70	710-0779A		Truss Mach. AB-Tap Scr. #10 x .5" Lg.
20	731-0705		Headlight Housing	71	730-3000		Reflector (Optional)
21	710-0227		Hex Wash. Hd. AB-Tap Scr. #8 x .5" Lg.	72	17330A		Rear Fender
23	710-0118		Hex Bolt 5/16-18 x .75" Lg.	73	831-0823A		Throttle Control Box Ass'y.
24	710-0166		Truss Mach. Scr. 1/4-20 x 1" Lg.	74	746-0634		Throttle Control Wire 35" Lg.
25	710-0599		Hex Wash. Hd. Scr. 1/4" x .5" Lg.	75	710-0167		Carriage Bolt 1/4-20 x .5" Lg.
26	731-1053A		Index Brkt.	76	725-0201		Key
27	736-0119		L-Wash. 5/16" I.D.*	77	736-0222		Ext. L-Wash. 1/4" I.D.
28	712-0267		Hex Nut 5/16-18 Thd.*	78	17294B		Dash Support Brkt.—L.H.
29	726-0320		Insulator Nut Plate	94	16989A		Engine Baffle
30	725-1643		Reverse Safety Switch	95	731-0511-12		Trim Strip 10" Lg.
31	725-1426		Solenoid	96	751-0474		Muffler
32	710-0726		Hex Hd. Rolling Scr. 5/16-24 x .75" Lg.	97	736-0170		Spec. L-Wash. 5/16" I.D.
				98	16934		Front Heat Shield
				99	725-0634		Light Switch
				100	17782		Retainer Clip
				101	749-0814		Dash Support Tube
				102	736-3078		FI-Wash. .344" I.D. x 1" O.D.
				103	783-0013		Dash Panel Fastening Tab

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

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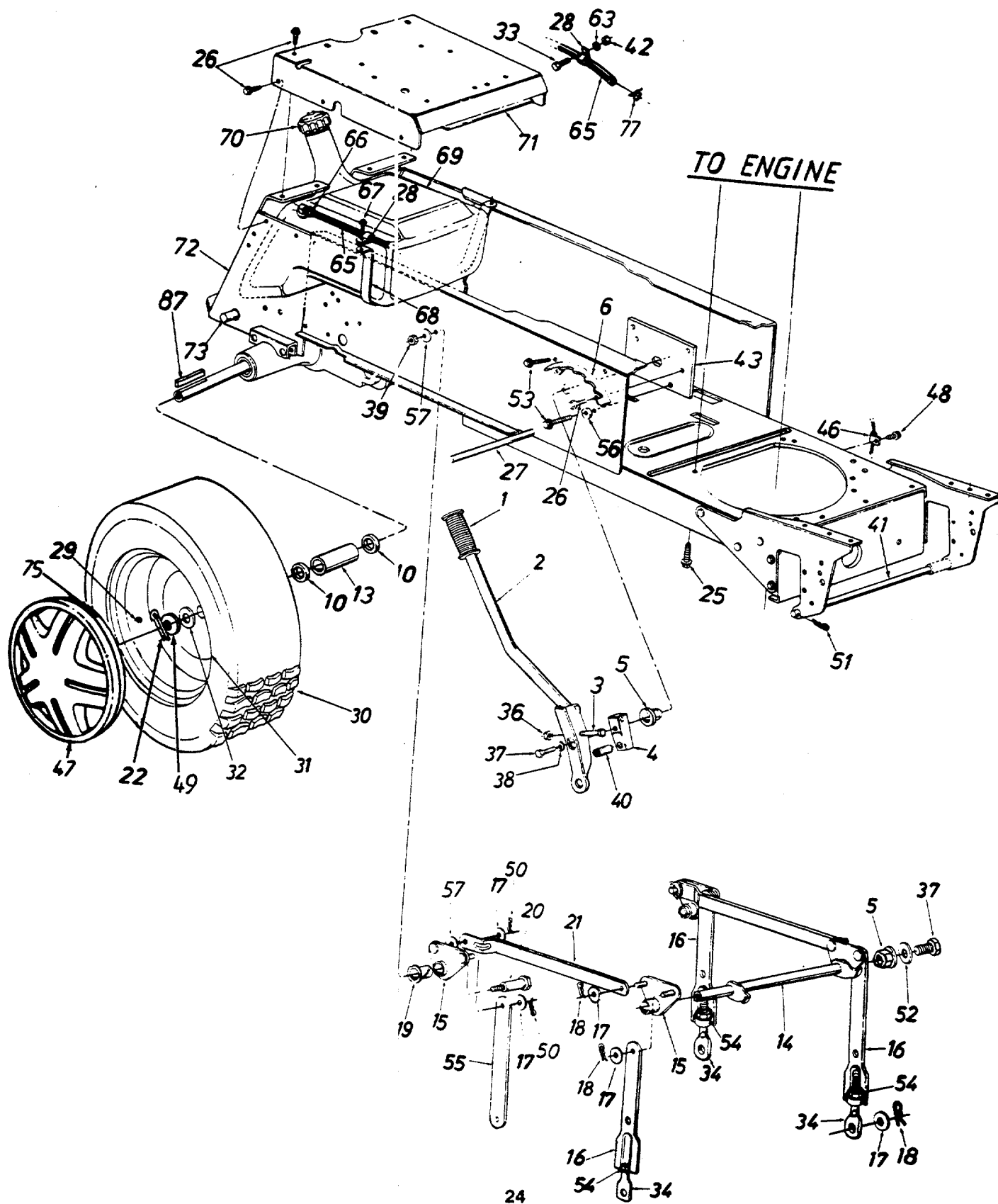
Model 839

PARTS LIST FOR MODEL 839 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	16512		Steering Column Ass'y.	34	714-0121		Cotter Pin 5/32" Dia.
2	738-0763		Lower Steering Shaft	35	736-0316		Flat Washer
3	710-0958		Hex Bolt 1/4-20 x 1.31" Lg.	36	741-0523		Flange Brg. .757" I.D.
4	712-0324		Hex L-Nut 1/4-20 Thd.	37	747-0721		Tie Rod 20.25" Lg.
5	712-0337		Hex Nut 5/8-18 Thd.*	38	16843		Pivot Bar Assy.
6	717-0943A		Steering Gear Segment	39	16889		Pivot Bar Support Brkt.—Front
7	736-0317		Bell-Wash. 5/8" I.D. x 1.25" O.D.	40	16890		Pivot Bar Support Brkt.—Rear
8	712-0241		Hex Nut 3/8-24 Thd.	41	736-0188		Fl-Wash. .76" I.D. x 1.49" O.D.
9	712-0711		Hex Jam Nut 3/8-24 Thd.	42	16915		Front Axle Ass'y.—L.H.
10	736-0169		L-Wash. 3/8" I.D.*	43	16914		Front Axle Ass'y.—R.H.
11	738-0768		Steering Gear Segment Shaft	44	736-0286		Bowed Washer
12	736-0187		Fl-Wash. .64" I.D. x 1.24" O.D.	45	748-0160		Spacer .755" I.D. x 1.25" O.D.
13	748-0227A		Hex Flange Brg. .63" I.D.	46	710-0331		Hex Bolt 3/8-24 x 2.25" Lg.
14	723-3018		Ball Joint Ass'y.	47	712-0798		Hex Nut 3/8-16 Thd.*
15	710-0599		Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg.	48	741-0516		Flange Brg. .75" I.D.
16	16888		Deck Idler Support Brkt.	49	736-0316		Fl-Wash. .71" I.D. x 1.5" O.D.
17	736-0343		Fl-Wash. .33" I.D. x 1.25" O.D.	50	734-1500A		Wheel Ass'y. Comp.
18	750-0532		Spacer .985" I.D. x 1.25" O.D.	51	734-0275		Tire Only
19	736-0119		L-Wash. 5/16" I.D.*	52	734-1501A		Rim Only
20	712-0123		Hex Nut 5/16-24 Thd.*	53	726-0271		Push Nut
21	736-0242		Bell-Wash. .345" I.D. x .88" O.D.	54	711-0222		Battery Hold Down Rod
22	16894		Bearing Retainer Brkt.	55	17635		Battery Plate
23	710-0157		Hex Bolt 5/16-24 x .75" Lg.	58	725-1635		Battery (275 Cold Crank Amps)
24	710-0793		Ribbed Neck Bolt 3/8-24 x .8" Lg.	59	731-1132		Battery Cover
25	710-0604		Hex Wash. TT-Tap Scr. 5/16-18 x .62" Lg.	60	712-0113		Wing Nut Plastic 1/4-20 Thd.
26	747-0579		Steering Drag Link	61	731-0954		Steering Bellow
27	16896		Pivot Bar Side Plate—R.H.	64	731-0806A		Steering Wheel
28	16897		Pivot Bar Side Plate—L.H.	65	731-0220		Steering Wheel Cap
29	710-0538		Hex Bolt 5/16-18 x .62" Lg.	66	712-0237		Hex L-Nut 5/16-24 Thd.
30	16918		Steering Arm	67	17359B	N	Lower Frame
31	738-0777		Deck Connecting Rod	70	714-0149B		Internal Cotter Pin
32	738-0775		Pivot Bar Shld. Bolt 3/8-16 x 5/8" Lg.	71	734-1615		Hub Cap
33	731-0484A		Cap	72	727-0425A		Spring Clip
				76	710-0776A		Hex AB-Tap Scr. 1/4 x .62" Lg.
				77	712-0446		Hex Jam L-Nut 3/8-24 Thd.
				78	737-0280		Grease Fitting
				79	734-0255		Air Valve

*For faster service obtain standard nuts, bolts and washers locally.
If these items cannot be obtained locally, order by part number
and size as shown on parts list.

Model 839



Model 839

PARTS LIST FOR MODEL 839 LAWN TRACTOR

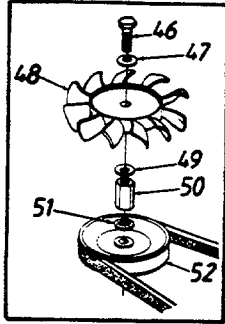
EF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	720-0233		Grip	39	712-0181		Hex Top L-Nut 3/8-16 Thd.
2	17282		Lift Handle Ass'y.	40	732-0369		Compression Spring
3	710-0442		Hex Bolt 5/16-18 x 1.5" Lg.*	41	738-0777		Deck Connecting Rod
4	748-0274A		Lift Shaft Drive	42	712-0287		Hex Nut 1/4-20 Thd.*
5	741-0225		Plastic Hex Brg. 5/8" I.D.	43	14170		Index Brkt. Reinforcement Plate
6	14231		Index Brkt. Deck Lift				
0	736-0163		FI-Wash. 1.03" I.D. x 1.62" O.D.	46	726-0273	N	Mounting Clamp
3	750-0762		Spacer 1" I.D. x 1.25" O.D.	47	734-1617		Hub Cap
4	13889		Lift Shaft Ass'y.	48	710-0599		Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg.
5	13895		Lift Pivot Brkt. Ass'y.				
6	17303		Adj. Deck Lift Link	50	714-0111		Cotter Pin .09 Dia. x 1.0" Lg.
7	736-0192		FI-Wash. 1/2" I.D. x 1.00" O.D. x .090"	51	714-0149B		Int. Cotter Pin
				52	736-0231		Flat Wash. .34" I.D. x 1.12" O.D. x .125"
8	714-0101		Hairpin Cotter				
9	741-0295		Nyliner 5/8" I.D. x .88" Lg.	53	710-0600		Hex Wash. Hd. AB-Tap Scr. 5/16-24 x .5" Lg.
10	738-0445		Shld. Bolt 5/8" Dia. x .96" Lg. 3/8-16	54	712-0206		Hex Nut 1/2-13 Thd.
11	13790		Connecting Link	55	14399		Deck Link
12	714-0142		Cotter Pin 3/16" Dia. x 1.5" Lg.	56	736-0264		FI-Wash. .344" I.D.
15	710-0502A		Hex Wash. Hd. Scr. 3/8-16 x 1.25" Lg.	57	736-0219		Bell-Wash. .4" I.D. x 1.13" O.D.
				63	736-0329		L-Wash. 1/4" I.D.*
16	710-0726		Hex Thd. Rolling Scr. 5/16-18 x .75" Lg.	65	751-0535-46		Fuel Line 46" Lg.
				66	726-0205		Hose Clamp
17	738-0435		Running Board Rod	67	710-0776		Hex AB-Tap Scr. 1/4 x .62" Lg.
18	726-0272		Clamp	68	17424		Fuel Tank Strap
19	734-0255		Air Valve	69	751-0566		Gas Tank
20	734-1005		Rear Wheel Ass'y. Comp.**	70	751-0531B		Gas Gauge
	734-0322		Tire Only**	71	16848C		Seat Plate
21	734-1015		Rear Wheel Rim Only	72	17344A	N	Hitch Plate
22	736-0345		Flat Washer	73	738-0482		Hitch Rod
23	710-0258		Hex Bolt 1/4-20 x .62" Lg.	75	727-0425A		Spring Clip
24	711-0817		Eye Bolt Adj. Link 1/2-13 Thd.	77	726-0272		Hose Clamp
26	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	87	714-0120		Sq. Key 1/4" x 3" Lg.
27	710-0237		Hex Bolt 5/16-24 x .62" Lg.*				

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

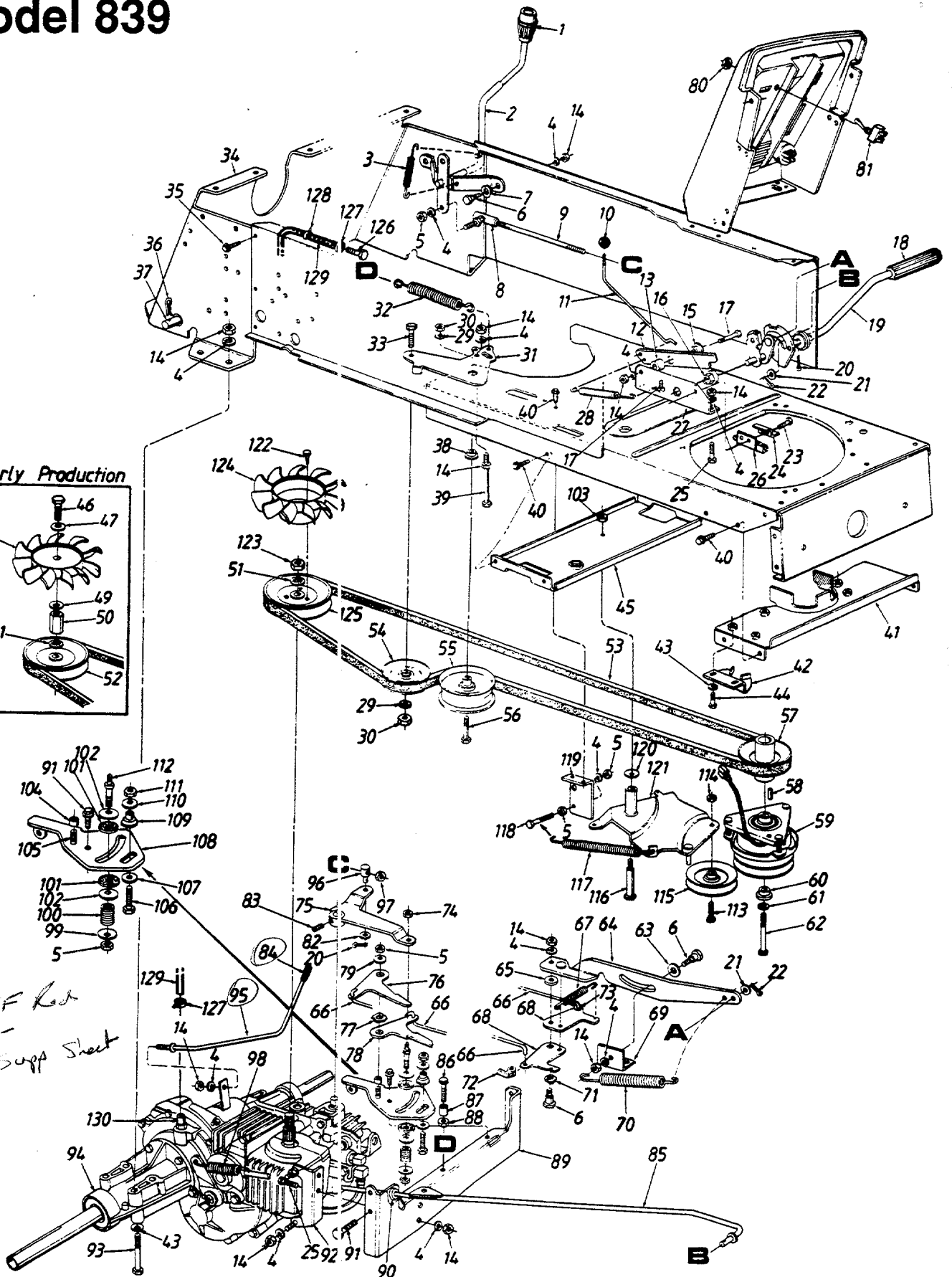
**NOTE: If brand of tire is important, order by part number and description (description is printed on the sidewall of tire) [i.e. Armstrong Super Turf, Goodyear Softrac, Carlisle Turf Saver, etc.].

Model 839

Early Production



RELIEF Rod
CHANGE -
SEE pg Supp Sheet
T-103



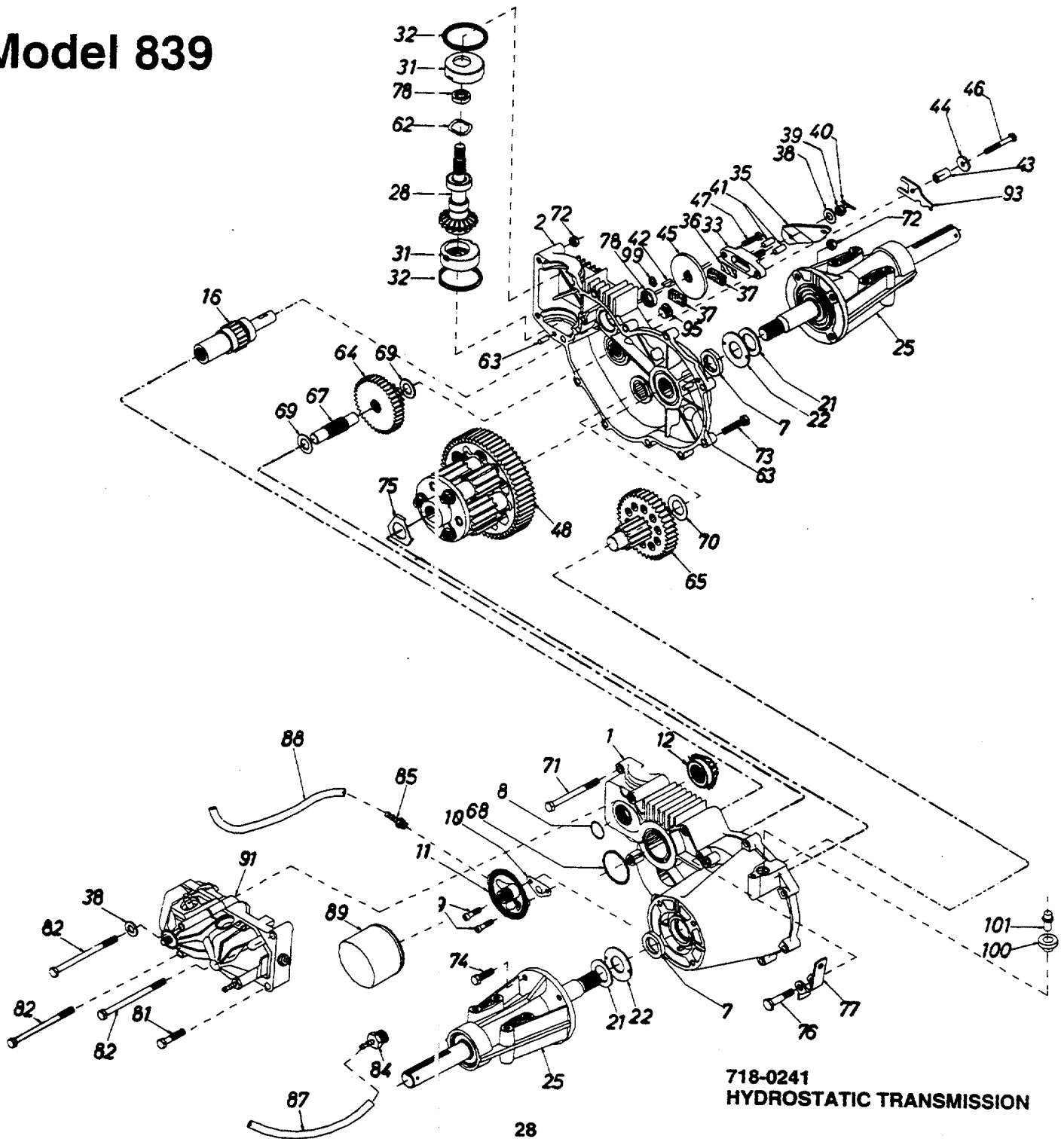
PARTS LIST FOR MODEL 839 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	720-0218		Shift Knob	59	717-0949		Electric Clutch
2	647-0010	N	Speed Control Lever Ass'y.	60	738-0785		Shld. Spacer
3	732-0433		Ext. Spring 2.75" Lg.	61	736-0171		L-Wash. 7/16" I.D.
4	736-0119		L-Wash. 5/16" I.D.*	62	710-1049		Hex Cap Bolt 7/16-20 x 3.75" Lg.
5	712-0123		Hex Nut 5/16-24 Thd.*	63	736-0179		Fl-Wash. .531" I.D. x 1.25" O.D.
6	738-0296		Shld. Bolt .437" Dia. x .268"	64	683-0030	N	Neutral Return Link Ass'y.
7	736-0141		Spr. Wash. .445" I.D. x .75" O.D.	65	736-3074		Fl-Wash. .344" I.D. x 1.12" O.D.
8	723-3012		Ball Joint 5/16-24 Thd.				(Hdn.)
9	747-0857	N	Speed Selector Adjusting Rod	66	747-0880	N	Connecting Rod
10	720-0166		Ball Knob	67	732-0387		Ext. Spring 2.5" Lg.
11	747-0876	N	Brake Lockout Rod	68	17757		Balancer Brkt.
12	16980		Brake Lockout Brkt.	69	17755A	N	Bracket
13	750-0214		Spacer .34" I.D. x .88" O.D.	70	732-0717	N	Ext. Spring 3.94" Lg.
14	712-0267		Hex Nut 5/16-18 Thd.*	71	736-0141		Spr.-Wash. .445" I.D. x .75" O.D.
15	748-0234		Shld. Spacer .27" Lg.	72	726-0281		Rod End Clevis Clip—R.H.
16	741-0225		Hex Flange Bearing	73	726-0280		Rod End Clevis Clip—L.H.
17	710-0528		Hex Bolt 5/16-18 x 1.25" Lg.	74	712-0116		Hex Ins. L-Nut 3/8-24 Thd.
18	735-0196		Foot Pad	75	683-0032	N	Pintle Bracket Ass'y.
19	17911	N	Foot Pedal Ass'y.	76	783-0053	N	Flat Scissors
20	714-0111		Cotter Pin 3/32" Dia. x 1" Lg.	77	736-0174		Spr. Wash. .625" I.D. x .885" O.D.
21	736-0275		Fl-Wash. .34" I.D. x .68" O.D.	78	783-0054	N	Offset Scissors
22	714-0115		Cotter Pin 1/8" Dia. x 1" Lg.	79	736-3078		Fl-Wash. .344" I.D. x 1" O.D.
23	710-0436		Hex B-Tap Scr. #10 x .62" Lg.				(Hdn.)
24	17962		Switch Plate	80	712-3014		Hex Nut 1/2-27 Thd.
25	710-0118		Hex Bolt 5/16-18 x .75" Lg.	81	725-0893		Toggle Switch
26	725-3169A		Safety Switch (Clutch)	82	736-0185		Fl-Wash. .406" I.D. x .75" O.D.
27	16924A		Clutch Ass'y. Mtg. Brkt.	83	710-0257	N	Hex Socket Set Screw
28	732-0395		Ext. Spring 2.51" Lg.	84	720-0238		Rod End Grip
29	736-0169		L-Wash. 3/8" I.D.*	85	647-0006	N	Brake Rod Ass'y.
30	712-0798		Hex Nut 3/8-16 Thd.*	86	710-0778		Hex Wash. Hd. Scr. 1/4-20 x 1.5" Lg.
31	783-0056	N	Idler Brkt.				
32	732-0470		Ext. Spring 4.75" Lg.	87	750-0555		Spacer .39" Lg.
33	710-0344		Hex Bolt 3/8-16 x 1.5" Lg.	88	712-3006		Hex Nut 1/4-20 Thd. (Gr. 5)
34	17344A	N	Hitch Plate	89	783-0051	N	Transaxle Torque Brkt.
35	710-0726		Hex Wash. AB-Tap Scr. 5/16 x .75" Lg.	90	731-0555A		Grommet
				91	710-0604		Hex Wash. Hd. TT-Tap Scr. 5/16-18 x .62" Lg.
36	714-0147		Hitch Pin				
37	738-0482		Hitch Rod	92	783-0050	N	Transaxle Torque Brace
38	738-0347		Shld. Spacer .625" I.D.	93	710-0189		Hex Bolt 5/16-18 x 3" Lg.
39	710-0176		Hex Bolt 5/16-18 x 2.75" Lg.	94	718-0241	N	Transaxle (See Breakdown)
40	710-0599		Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg.	95	747-8881	N	Bypass Rod 747-0909
41	17358C		Belt Guard Brkt.	96	711-0198		Ferrule 3/8-24 Thd.
42	17418		Torque Bracket	97	712-0711		Hex Jam Nut 3/8-24 Thd.
43	736-0242		Bell-Wash. .345" I.D. x .88" O.D.	98	732-0716		Ext. Spring 4.01" Lg.
44	710-3008		Hex Cap Scr. 5/16-18 x .75" Lg. (Gr. 5)	99	736-3008		Fl-Wash. .312" I.D. x .75" O.D.
45	16888		Deck Idler Support Brkt.	100	732-0718	N	Comp. Spring 1.19" Lg.
46	710-1043A	N	Hex Cap Bolt 9/16-18 x .5" Lg.	101	761-0196		Friction Washer
47	736-0427		Bell-Wash. .567" I.D. x 1.125" O.D.	102	736-0219		Bell-Wash. .40" I.D. x 1.13" O.D.
48	731-0974		Fan	103	712-0375		Hex Cent. L-Nut 3/8-16 Thd.
49	736-0516		Fl-Wash. 9/16" I.D. x 1.75" O.D.	104	750-0808		Spacer
50	712-0356		Fan Adapter Nut 9/16-18 Thd.	105	710-1012		Rib Neck Bolt 5/16-18 x .62" Lg.
51	736-0508		Int. L-Wash. 9/16" I.D.	106	710-0299		Hex Bolt 1/4-28 x 1" Lg. (Gr. 5)
52	756-0635	N	Input Pulley	107	736-3090		Fl-Wash. .26" I.D. x .72" O.D.
53	754-0435		"V"-Belt	108	783-0052	N	Scissors Mtg. Brkt.
54	756-0116		Idler Pulley	109	750-0918		Centering Gauge Spacer
55	756-0515		Fl-Idler Pulley	110	736-0270		Bell-Wash. 1/4" I.D.
56	710-3096	N	Hex Bolt 3/8-16 x 2" Lg. (Gr. 8)	111	712-0138		Hex Nut 1/4-28 Thd.*
57	756-0637	N	Engine Pulley	112	738-0879	N	Friction Disc Stud
58	714-0128		Sq.-Key 1/4" x 1" Lg.	113	710-0459		Hex Bolt 3/8-24 x 1.5" Lg.
				114	712-0214		Hex Cent. L-Nut 3/8-24 Thd.
				115	756-0293A		V-Belt Idler
				116	738-0129		Shld. Bolt .498" Dia. x 2.05

PARTS LIST FOR MCDL 839 LAWN TRACTOR (CONTINUED)

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
117	732-0180		Ext. Spring 4" Lg.	124	731-1449	N	Fan
118	710-0409		Hex Bolt 5/16-24 x 1.75" Lg.	125	756-0635A	N	Input Pulley
119	13833		Parking Brake Mtg. Brkt.	126	731-1476		Plastic Vent
120	736-0105		Bell-Wash. .38" I.D. x .88" O.D.	127	735-0149		Rubber Grommet
121	14076A		Idler Brkt. Deck Ass'y.	128	725-0157		Cable Tie
122	710-3007		Hex Wash. Hd. Tap Scr. #12 x 3/8" Lg.	129	751-0588		Hose 1/2" I.D. x 18" Lg.
123	712-3035		Hex Jam Nut 9/16-18 Thd.	130	737-0294		Hose Fitting

Model 839



Model 839

PARTS LIST FOR 718-0241 HYDROSTATIC TRANSMISSION

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	HG-52881	Housing-L.H. Ass'y.	1
2	HG-52879	Housing-R.H. Ass'y.	1
7	HG-44782	Oil Seal .984" x 1.5" x .25"	2
8	HG-50070	Quad Ring	1
10	HG-44920	Filter Base Gasket	1
11	HG-70053	Filter Base Ass'y.	1
12	HG-62876	Pinion Ass'y.	1
16	HG-62877	Brake Shaft Ass'y.	1
21	HG-44805	Washer, 1.0" x 1.63" x .08"	2
22	HG-44806	Washer, 1.0" x 2.06" x .09"	2
25	HG-82888	Axle Mounting Horn Ass'y.	2
28	HG-70054	Input Ass'y.	1
31	HG-44800	Ret. Bearing	2
32	HG-44802	O-Ring 2-1/2" O.D.	2
33	HG-62589	(Sub) Brake Yoke Ass'y.	1
35	HG-44094	Brake Arm	1
36	HG-44134	Puck Plate	1
37	HG-44132	Brake Puck	2
38	HG-44130	Washer, 7/16" x 7/8" O.D. x .060 H.T.	2
39	HG-44142	Nut, Castle 5/16-24 PL	1
40	HG-44101	Cotter Pin	1
41	HG-44127	Brake Actuating Pin	2
42	HG-44143	Hi-Pro Key 3/16" x 5/8"	1
43	HG-23711	Torsion Spring Spacer	1
44	HG-44278	Washer 7/8 O.D. x .260 I.D. x 1/8	1
45	HG-44090	Disc Brake	1
46	HG-44300	Bolt 1/4-20" x 2 W/Nylok Gr. 5	1
47	HG-44433	Bolt 1/4-20" x 1 W/Nylok Gr. 5	1
48	HG-62834	Differential Ass'y.	1
62	HG-44843	Wave Washer	1
63	HG-44757	Dowel Pin	2
64	HG-44776	Reduction Gear 14T-38T	1
65	HG-70051	Final Drive Pinion Ass'y.	1
67	HG-44779	Jack Shaft	1
68	HG-44781	O-Ring	1
69	HG-44795	FI-Wash. 5/8" I.D. x 1-5/32" O.D. Ht.	2
70	HG-44794	FI-Wash. 7/8" I.D. x 1-1/2" O.D. Ht.	1
71	HG-44827	Hex Bolt H.D. 5/16-18" x 3-1/2"	2
72	HG-43064	Hex Lock Nut 5/16-18" 2-Way Plt.	4
73	HG-44841	Hex Bolt 5/16-18" x 1-1/2" Gr. 5 Plt.	11
74	HG-45089	Hex Bolt 5/16-18" x 1	7
75	HG-44880	Differential Washer .050	1
76	HG-44785	Shld. Bolt	1
77	HG-44786	Freewheel Actuating Arm	1
78	HG-44761	Oil Seal .625" x 1.0" x .25"	2
81	HG-43084	Hex Bolt 5/16-18" x 1-3/4"	1
82	HG-44820	Hex Bolt 5/16-18" x 4-1/2"	3
84	HG-50009	SAE Port Straight Fitting 7/8"	1
85	HG-50010	SAE Port Straight Fitting 7/16"	1
87	HG-50011	Hose, 8-1/2" Long	1
88	HG-50012	Hose 10-1/2" Long	1
89	HG-50037	Spin-On Filter	1
91	HG-BDU-10L-256	Transmission	1
93	17434A	Bracket	1
95	HG-9005110-5600	Straight Thread Plug	1
99	HG-50136	Washer 5/16" I.D. x 9/16" O.D.	1
100	HG-50133	Vent Bushing	1
101	HG-50134	Vent	1
102	HG-70052	Seal Kit	1



MANUFACTURER'S LIMITED WARRANTY

THE MTD TWO YEAR SUPREME WARRANTY:

For TWO YEARS from the date of retail purchase within the United States of America, its possessions and territories, MTD PRODUCTS INC will, at its option, repair or replace, for the original purchaser, free of charge, any part or parts found to be defective in material or workmanship. This warranty covers units which have been operated and maintained in accordance with the owner's instructions furnished with the unit, and which have not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance or alteration. Normal wear parts or components thereof are subject to separate terms as noted below in the "NO FAULT Ninety Day Consumer Warranty" clause.

NO FAULT Ninety Day Consumer Warranty on Normal Wear Parts: All normal wear part failures will be covered on this product for a period of 90 days regardless of cause. After 90 days, but within the two year warranty period, normal wear part failures will be covered if caused by defects in material or workmanship of other component parts. Normal wear parts are defined as batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats and tires.

How to Obtain Service: Warranty service is available, with proof of purchase, through your local authorized service dealer or distributor. To locate the dealer or distributor in your area, please check the yellow pages or contact the Customer Service Department of MTD PRODUCTS INC, P.O. Box 368022, Cleveland, Ohio 44136-9722 phone (216) 225-7711. The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by the Service Department of MTD PRODUCTS INC.

Transportation Charges: Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any part submitted for replacement under this warranty must be paid by the purchaser unless such return is requested in writing by MTD PRODUCTS INC.

Units Exported Out of the United States: MTD PRODUCTS INC does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except, those sold through MTD's authorized channels of export distribution.

Other Warranties:

1. The engine or motor or component parts thereof carry separate warranties from their manufacturers. Please refer to the applicable manufacturer's warranty on these items.
2. Log splitter pumps, valves and cylinders or component parts thereof are covered by a one year warranty.
3. All other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose are hereby expressly disclaimed in their entirety.
4. The provisions as set forth in this warranty provide the sole and exclusive remedy of MTD PRODUCTS INC's obligations arising from the sale of its products. MTD PRODUCTS INC will not be liable for incidental or consequential loss or damage.

How State Law Relates to This Warranty: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Certain disclaimers are not allowed in some states and therefore they may not apply to you under all circumstances.

Note: This warranty does not cover routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments. Nor does this warranty cover normal deterioration of the exterior finish due to use or exposure.

